NOTE

This Microfiche meets the quality requirements of the American National Standard for Microfiche of Documents (ANSI PH5.9-1975). However, because of imperfections in the document from which it was made, it contains images that are illegible or difficult to read. The source document for this microfiche is the best copy that could be obtained prior to filming.

CIS

Congressional Information Service
Washington, D.C.

S. Hrg. 100-445, Pt. 31

EMPLOYMENT-UNEMPLOYMENT

HEARINGS

BEFORE THE

JOINT ECONOMIC COMMITTEE
CONGRESS OF THE UNITED STATES

ONE HUNDREDTH CONGRESS

SECOND SESSION

PART 31

FEBRUARY 5, MARCH 4, AND APRIL 1, 1988

Printed for the use of the Joint Economic Committee

U.S. GOVERNMENT PRINTING OFFICE
90-832 WASHINGTON : 1989

For sale by the Superintendent of Documents, Congressional Sales Office
U.S. Government Printing Office, Washington, DC 20402

J841-4

JOINT ECONOMIC COMMITTEE

[Created pursuant to sec. 5(a) of Public Law 304, 79th Congress]

SENATE

PAUL S. SARBANES, Maryland,
Chairman
WILLIAM PROXMIRE, Maryland
LLOYD BENTSEN, Texas
EDWARD M. KENNEDY, Massachusetts
JOHN MELCHER, Montana
JEFF BINGAMAN, New Mexico
WILLIAM V. ROTH, Jr., Delaware
STEVE SYMMS, Idaho
ALFONSE M. D'AMATO, New York
PETE WILSON, California

HOUSE OF REPRESENTATIVES

LEE H. HAMILTON, Indiana,
Vice Chairman
AUGUSTUS F. HAWKINS, California
DAVID R. OBEY, Wisconsin
JAMES H. SCHEUER, New York
FORTNEY H. (PETE) STARK, California
STEPHEN J. SOLARZ, New York
CHALMERS P. WYLIE, Ohio
OLYMPIA J. SNOWE, Maine
HAMILTON FISH, Jr., New York
J. ALEX McMILLAN, North Carolina

Judith Davison, *Executive Director*
Richard F Kaufman, *General Counsel*
Stephen Quick, *Chief Economist*
Robert J. Tosterud *Minority Assistant Director*

CONTENTS

WITNESSES AND STATEMENTS

FRIDAY, FEBRUARY 5, 1988

Page

Sarbanes, Hon. Paul S., chairman of the Joint Economic Committee: Opening statement 1

Wylie, Hon. Chalmers P., member of the Joint Economic Committee: Opening statement 1

Norwood, Hon. Janet L., Commissioner, Bureau of Labor Statistics, Department of Labor, accompanied by Thomas J. Plewes, Associate Commissioner, Office of Employment and Unemployment Statistics; and Kenneth V. Dalton, Associate Commissioner, Office of Prices and Living Conditions 2

FRIDAY, MARCH 4, 1988

Sarbanes, Hon. Paul S., chairman of the Joint Economic Committee: Opening statement 35

Roth, Hon. William V., Jr., member of the Joint Economic Committee: Opening statement 36

Proxmire, Hon. William, member of the Joint Economic Committee: Opening statement 40

Norwood, Hon. Janet L., Commissioner, Bureau of Labor Statistics, Department of Labor, accompanied by Kenneth V. Dalton, Associate Commissioner, Office of Prices and Living Conditions; and John E. Bregger, Assistant Commissioner, Office of Current Employment Analysis 40

FRIDAY, APRIL 1, 1988

Sarbanes, Hon. Paul S., chairman of the Joint Economic Committee: Opening statement 93

Proxmire, Hon. William, member of the Joint Economic Committee: Opening statement 94

Norwood, Hon. Janet L., Commissioner, Bureau of Labor Statistics, Department of Labor, accompanied by Thomas J. Plewes, Associate Commissioner, Office of Employment and Unemployment Statistics; and Kenneth V. Dalton, Associate Commissioner, Office of Prices and Living Conditions 95

SUBMISSIONS FOR THE RECORD

FRIDAY, FEBRUARY 5, 1988

Norwood, Hon. Janet L., et al.:
  Prepared statement 9
  Press release No. 88-57 entitled "The Employment Situation: January 1988," Bureau of Labor Statistics, Department of Labor, February 5, 1988 11

FRIDAY, MARCH 4, 1988

D'Amato, Hon. Alfonse M., member of the Joint Economic Committee: Written opening statement 38

Norwood, Hon. Janet L., et al.:
  Table reflecting unemployment rates of all civilian workers by alternative seasonal adjustment methods 42

Norwood, Hon. Janet L., et al.—Continued | Page
Press release No. 88-103 entitled "The Employment Situation: February 1988," Bureau of Labor Statistics, Department of Labor, March 4, 1988.. 44
Response to Representative Solarz' request to supply a chart reflecting what the unemployment and poverty rates were for each year since 1977 71
Response to Representative Solarz' request to supply the unemployment rate preceding the increase in the minimum wage in the year in which it was increased, and what the unemployment rate was the following year 79
Response to Representative Solarz' query regarding people in private industry being worse off than they were in 1981 in nonsupervisory work 84
Response to Senator Proxmire's query regarding gains in U.S. manufacturing productivity 88
Roth, Hon. William V., Jr., member of the Joint Economic Committee: Article entitled "Now the Good News: The Middle Class Lives," from the Washington Post, February 7, 1988 67

FRIDAY, APRIL 1, 1988

Norwood, Hon. Janet L., et al.:

Table reflecting unemployment rates of all civilian workers by alternative seasonal adjustment methods 97
Press release No. 88-156 entitled "The Employment Situation: March 1988," Bureau of Labor Statistics, Department of Labor, April 1, 1989 99
Response to Senator Sarbanes' query regarding the range of unemployment based on varying definitions of unemployment and the labor force 136
Roth, Hon. William V., Jr., member of the Joint Economic Committee: Written opening statement 95

EMPLOYMENT-UNEMPLOYMENT

FRIDAY, FEBRUARY 5, 1988

CONGRESS OF THE UNITED STATES,
JOINT ECONOMIC COMMITTEE,
Washington, DC.

The committee met, pursuant to notice, at 9:30 a.m., in room SD-628, Dirksen Senate Office Building, Hon. Paul S. Sarbanes (chairman of the committee) presiding.

Present: Senator Sarbanes and Representative Wylie.

Also present: William Buechner, professional staff member.

OPENING STATEMENT OF SENATOR SARBANES, CHAIRMAN

Senator SARBANES. The committee will come to order.

We are very pleased once again to welcome Janet Norwood and her associates in their monthly appearance before the Joint Economic Committee to discuss the employment and unemployment figure for January.

Today's hearing takes place in the context of the JEC's annual hearings on the economic outlook, in conjunction with the committee's annual review and evaluation of the Economic Report of the President, which we expect to receive in the latter part of this month. Although this hearing is not formally a part of that series, the Commissioner's testimony comes at an opportune time, since it gives us a snapshot of the state of the economy.

A number of forecasters, including several who testified before the committee in late January, expressed the concern that last year's volatility in the financial markets could slow the economy or cause a recession this year.

Today's employment and unemployment figures are our first data on how the economy is doing in 1988, and I will now turn to the Commissioner for her analysis of the January figures.

I will turn first, though, to Congressman Wylie, the ranking member who is here with us this morning, for his statement.

OPENING STATEMENT OF REPRESENTATIVE WYLIE

Representative WYLIE. Thank you very much, Mr. Chairman.

It gives me great pleasure to welcome Commissioner Norwood again this morning, especially when she is the bearer of good tidings. I note from your prepared statement that the civilian unemployment rate is unchanged, but household civilian employment posted a gain of 385,000. The January job gain pushes the level of total employment to 114.1 million, a new record. More Americans are working today than ever before in history.

In addition, the employment-population ratio, an important measure of our economy's ability to create enough jobs, also signals economic strength. At 62.1 percent, the January employment-population ratio hit a new high.

We are now entering the 63d month of continued economic expansion. This is now the longest peacetime upswing in American history.

Over the course of this expansion, we have created 15 million new jobs. Unlike in many previous upturns, this economic progress has occurred without reigniting inflation. With continued economic growth, we can look forward to millions of new jobs being created in 1988.

Now, you are going to tell us the real story, and I hope my analysis has been somewhat accurate.

Thank you very much, Mr. Chairman. And welcome, Commissioner Norwood.

Senator SARBANES. Commissioner, we would be happy to hear from you.

STATEMENT OF HON. JANET L. NORWOOD, COMMISSIONER, BUREAU OF LABOR STATISTICS, DEPARTMENT OF LABOR, ACCOMPANIED BY THOMAS J. PLEWES, ASSOCIATE COMMISSIONER, OFFICE OF EMPLOYMENT AND UNEMPLOYMENT STATISTICS; AND KENNETH V. DALTON, ASSOCIATE COMMISSIONER, OFFICE OF PRICES AND LIVING CONDITIONS

Mrs. NORWOOD. Thank you very much.

I have with me as usual Mr. Dalton and Mr. Plewes. We are always very pleased to be here.

Unemployment was unchanged in January, as the overall jobless rate held at 5.7 percent and the civilian rate at 5.8 percent. Whereas the household survey showed continued employment strength, the business survey, although positive, showed much smaller gains than in recent months.

Employment in the household survey rose by 385,000, bringing the gain over the last 4 months in line with the business survey. With this increase, the proportion of the population at work is now at a new high of 62.1 percent.

In the payroll survey, when Government is excluded, the increase in jobs totaled 175,000. About 155,000 of this gain was in the retail trade industry, as employers made fewer postholiday cutbacks. It may be that in some areas where recruitment has been difficult, retailers decided to retain more of their Christmas staff after the holidays then they usually do.

In the services industry, which has been very strong during the current expansion, job growth slowed. Business services—responsible for about 1 in every 8 new jobs during the current economic expansion—held steady, but jobs in health services rose by 35,000. In finance, insurance and real estate, little over-the-month growth occurred, as retrenchment in the financial industry began to take hold.

January gains in manufacturing were more limited than in recent months, with the largest increases concentrated in export-producing industries. Although several manufacturing industries, such as steel and autos, showed signs of weakness, other factories making durable goods have been reporting higher orders and shipments than previously and have had continued job gains.

Employment in the mining industry, which had been edging up for most of last year, fell by about 15,000. Most of that decline was in oil and gas extraction, where fewer rigs were in operation in January than in December.

The number of construction jobs fell by 50,000, reversing the gain reported in December, and the jobless rate among construction workers rose by 1.6 percentage points. These developments seem consistent with such recent indicators as housing starts, real value of construction put in place, building permits, and new house sales—all of which headed downward in December.

In summary, unemployment was unchanged in January. Employment growth occurred, but its strength may have slowed somewhat from the rate of previous months. The number of jobs in the services industry leveled off, factory job gains were less widespread than they have been in the last few months, and employment declined in construction and mining. Nevertheless, we must remember that the slowing of payroll employment gains that we have reported today takes place against a backdrop of employment gains that averaged nearly 400,000 per month during the last quarter of last year. While some industries are clearly having difficulties, we have in the past seen the numbers bounce back. We need another month or two of data to determine whether the January numbers will be sustained.

Mr. Chairman, I have included at the end of my prepared statement a little discussion to remind the committee, call the attention of the committee to our plans for changing the reference basis for the Consumer Price Index and the Producer Price Index. This is something that we do about once a decade or so. We had planned to do this earlier, but had to postpone it because of budget problems, and we are pleased that we will be able to modernize the presentation of the indexes beginning next month.

We would be glad to answer any questions you may have.

[The prepared statement of Mrs. Norwood, together with the Employment Situation press release, follows:]

FOR RELEASE: 9:30 A.M.,E.S.T.
FRIDAY, FEBRUARY 5, 1988

Advance copies of this statement are made available to the press with the explicit understanding that, prior to 8:30 a.m. Eastern time: (1) Wire services will not move over their wires copy based on information in this statement, (2) electronic media will not feed such information to member stations, and (3) representatives of news organizations will not contact anyone outside the Bureau of Labor Statistics to ask questions or solicit comments about information in this statement.

Prepared
Statement of

Dr. Janet L. Norwood
Commissioner
Bureau of Labor Statistics

before the

Joint Economic Committee
UNITED STATES CONGRESS

February 5, 1988

Mr. Chairman and Members of the Committee:

It is as always a pleasure to appear before the Committee to provide a few comments on the nation's employment situation.

Unemployment was unchanged in January, as the overall jobless rate held at 5.7 percent and the civilian rate at 5.8 percent. Whereas the household survey showed continued employment strength, the business survey, although positive, showed much smaller gains than in recent months.

Employment in the household survey rose by 385,000 after seasonal adjustment, bringing the gain over the last 4 months in line with the business survey. With this increase, the proportion of the population at work is now at a new high of 62.1 percent.

In the payroll survey, when Government is excluded, the increase in jobs totaled 175,000. About 155,000 of this gain was in the retail trade industry, as employers made fewer post-holiday cutbacks. It may be that, in some areas where recruitment has been difficult, retailers decided to retain more of their Christmas staff after the holidays than they usually do.

In the services industry, which has been very strong during the current expansion, job growth slowed. Business services--responsible for about 1 in every 8 new jobs during the current economic expansion--held steady, but jobs in health services rose by 35,000. In finance, insurance and real estate, little over-the-month growth occurred, as retrenchment in the financial industry began to take hold.

January gains in manufacturing were more limited than in recent months, with the largest increases concentrated in export-producing industries. Although several manufacturing industries, such as steel and autos, showed signs of weakness, other factories making durable goods have been reporting higher orders and shipments than previously and have had continued job gains.

Employment in the mining industry, which had been edging up for most of last year, fell by about 15,000. Most of the decline was in oil and gas extraction, where fewer rigs were in operation in January than in December.

The number of construction jobs fell by 50,000 (after seasonal adjustment), reversing the gain reported in December, and the jobless rate among construction workers rose by 1.6 percentage points. These developments seem consistent with such recent indicators as housing starts, real value of construction put in place, building permits, and new house sales -- all of which headed downward in December.

In summary, unemployment was unchanged in January. Employment growth occurred, but its strength may have slowed somewhat from the rate of previous months. The number of jobs in the services industry leveled off, factory job gains were less widespread than they have been in the last few months, and employment declined in construction and mining. Nevertheless, we must remember that the slowing of payroll employment gains that we have reported today takes place against a backdrop of employment gains that averaged nearly 400,000 per month during the last quarter of last year. While some industries are clearly having difficulties, we have in the past seen the numbers bounce back. We need another month or two of data to determine whether the January numbers will be sustained.

Prices

It has been our custom, Mr. Chairman to alert the Committee to planned program changes. I want to call your attention to our plans for changing the reference bases -- the years for which the indexes are set to equal 100 -- in our price programs. The new bases have been established, after review by OMB's Office of Federal Statistical Policy, to carry out the Government's longstanding policy of periodically updating index bases. It is important to note that a change in the reference base has no effect on the measured rate of inflation. Percent changes calculated on the new bases will be the same as those calculated on the old base (except for rounding).

The new reference base periods have been selected to coincide with the periods to which the index weighting structure refer. The base for the Consumer Price Index will be changed from 1967=100 to 1982-84=100, effective with the release of January 1988 data (on February 26). The new reference base for the Producer Price Index (to be released on February 12) will be 1982=100.

These planned changes were announced a year ago in order to provide time for all index users to adjust to the new base. We expect, nonetheless, to be quite busy over the next several months assisting those who need help in understanding the changes. As in the past, we will make data available on former bases even after the change has taken place, and will provide historical series on the new base to those who wish them. In addition, when users, for example, parties to contracts, request it, BLS will provide conversion factors to assist them in using the new data.

My colleagues and I will now be happy to answer any questions you may have.

Unemployment rates of all civilian workers by alternative seasonal adjustment methods

Month and year	Unadjusted rate	X-11 ARIMA method						X-11 method (official method before 1980)	Range (cols. 2-8)
		Official procedure	Concurrent (as first computed)	Concurrent (revised)	Stable	Total	Residual		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
1987									
January.....	7.3	6.7	6.7	6.7	6.7	6.7	6.6	6.7	.1
February....	7.2	6.6	6.6	6.6	6.6	6.6	6.6	6.7	.1
March........	6.9	6.5	6.5	6.5	6.6	6.5	6.5	6.6	.1
April........	6.2	6.3	6.3	6.3	6.4	6.3	6.3	6.3	.1
May..........	6.1	6.3	6.3	6.3	6.3	6.3	6.5	6.3	.2
June.........	6.3	6.1	6.1	6.1	6.1	6.1	6.2	6.1	.1
July.........	6.1	6.0	6.0	6.1	6.0	6.1	6.1	6.0	.1
August.......	5.8	6.0	6.0	6.0	6.0	6.1	6.1	6.0	.1
September...	5.7	5.9	5.9	5.9	6.0	5.9	5.9	5.9	.1
October.....	5.7	6.0	6.0	6.0	6.0	5.9	6.0	6.0	.1
November....	5.6	5.9	5.9	5.9	5.9	5.9	5.9	5.9	-
December....	5.4	5.8	5.8	5.8	5.7	5.7	5.8	5.8	.1
1988									
January.....	6.3	5.8	5.8	5.8	5.8	5.8	5.6	5.8	.2

SOURCE: U.S. DEPARTMENT OF LABOR
Bureau of Labor Statistics
February 1988

(1) *Unadjusted rate*. Unemployment rate for all civilian workers, not seasonally adjusted.

(2) *Official procedure (X-11 ARIMA method)*. The published seasonally adjusted rate for all civilian workers. Each of the 3 major civilian labor force components--agricultural employment, nonagricultural employment and unemployment--for 4 age-sex groups--males and females, ages 16-19 and 20 years and over--are seasonally adjusted independently using data from January 1974 forward. The data series for each of these 12 components are extended by a year at each end of the original series using ARIMA (Auto-Regressive, Integrated, Moving Average) models chosen specifically for each series. Each extended series is then seasonally adjusted with the X-11 portion of the X-11 ARIMA program. The 4 teenage unemployment and nonagricultural employment components are adjusted with the additive adjustment model, while the other components are adjusted with the multiplicative model. The unemployment rate is computed by summing the 4 seasonally adjusted unemployment components and calculating that total as a percent of the civilian labor force total derived by summing all 12 seasonally adjusted components. All the seasonally adjusted series are revised at the end of each year. Extrapolated factors for January-June are computed at the beginning of each year; extrapolated factors for July-December are computed in the middle of the year after the June data become available. Each set of 6-month factors are published in advance, in the January and July issues, respectively, of *Employment and Earnings*.

(3) *Concurrent (as first computed, X-11 ARIMA method)*. The official procedure for computation of the rate for all civilian workers using the 12 components is followed except that extrapolated factors are not used at all. Each component is seasonally adjusted with the X-11 ARIMA program each month as the most recent data become available. Rates for each month of the current year are shown as first computed; they are revised only once each year, at the end of the year when data for the full year become available. For example, the rate for January 1984 would be based, during 1984, on the adjustment of data from the period January 1974 through January 1984.

(4) *Concurrent (revised, X-11 ARIMA method)*. The procedure used is identical to (3) above, and the rate for the current month (the last month displayed) will always be the same in the two columns. However, all previous months are subject to revision each month based on the seasonal adjustment of all the components with data through the current month.

(5) *Stable (X-11 ARIMA method)*. Each of the 12 civilian labor force components is extended using ARIMA models as in the official procedure and then run through the X-11 part of the program using the stable option. This option assumes that seasonal patterns are basically constant from year-to-year and computes final seasonal factors as unweighted averages of all the seasonal-irregular components for each month across the entire span of the period adjusted. As in the official procedure, factors are extrapolated in 6-month intervals and the series are revised at the end of each year. The procedure for computation of the rate from the seasonally adjusted components is also identical to the official procedure.

(6) *Total (X-11 ARIMA method)*. This is one alternative aggregation procedure, in which total unemployment and civilian labor force levels are extended with ARIMA models and directly adjusted with multiplicative adjustment models in the X-11 part of the program. The rate is computed by taking seasonally adjusted total unemployment as a percent of seasonally adjusted total civilian labor force. Factors are extrapolated in 6-month intervals and the series revised at the end of each year.

(7) *Residual (X-11 ARIMA method)*. This is another alternative aggregation method, in which total civilian employment and civilian labor force levels are extended using ARIMA models and then directly adjusted with multiplicative adjustment models. The seasonally adjusted unemployment level is derived by subtracting seasonally adjusted employment from seasonally adjusted labor force. The rate is then computed by taking the derived unemployment level as a percent of the labor force level. Factors are extrapolated in 6-month intervals and the series revised at the end of each year.

(8) *X-11 method (official method before 1980)*. The method for computation of the official procedure is used except that the series are not extended with ARIMA models and the factors are projected in 12-month intervals. The standard X-11 program is used to perform the seasonal adjustment.

Methods of Adjustment: The X-11 ARIMA method was developed at Statistics Canada by the Seasonal Adjustment and Times Series Staff under the direction of Estela Bee Dagum. The method is described in *The X-11 ARIMA Seasonal Adjustment Method*, by Estela Bee Dagum, Statistics Canada Catalogue No. 12-564E, February 1980.

The standard X-11 method is described in *X-11 Variant of the Census Method II Seasonal Adjustment Program*, by Julius Shiskin, Allan Young and John Musgrave (Technical Paper No. 15, Bureau of the Census, 1967).

News United States
Department
of Labor

Bureau of Labor Statistics Washington, D.C. 20212

Technical information: (202) 523-1371
523-1944
523-1959
Media contact: 523-1913

USDL 88-57

TRANSMISSION OF MATERIAL IN THIS
RELEASE IS EMBARGOED UNTIL
8:30 A.M. (EST), FRIDAY,
FEBRUARY 5, 1988

THE EMPLOYMENT SITUATION: JANUARY 1988

Unemployment was unchanged in January, and the growth in nonfarm payroll jobs slowed, the Bureau of Labor Statistics of the U.S. Department of Labor reported today. The overall jobless rate was 5.7 percent and the civilian worker rate was 5.8 percent. Both rates have shown little change since last summer.

Nonagricultural payroll employment, as measured by the monthly survey of business establishments, increased marginally in January--by 105,000--while total civilian employment, as measured by the monthly survey of households, rose more markedly--385,000. Over the past year, employment levels in the establishment and household surveys have advanced by 2.8 and 3.1 million, respectively.

Unemployment (Household Survey Data)

Both the number of unemployed persons in January--7.0 million--and the civilian unemployment rate--5.8 percent--were unchanged from December, after seasonal adjustment. Jobless rates for adult men and women (each at 5.1 percent), teenagers (16.0 percent), whites (5.0 percent), and blacks (12.2 percent) also showed little or no change over the month. The unemployment rate for Hispanics, which tends to fluctuate more than those of whites and blacks, edged down to 7.2 percent over the month. (See tables A-2 and A-3.)

The average (mean) duration of unemployment, at 14.4 weeks, was little changed in January, while median duration was up slightly to 6.4 weeks. (See table A-7.)

Civilian Employment and the Labor Force (Household Survey Data)

Total civilian employment rose by 385,000 in January to 114.1 million, after seasonal adjustment, and the proportion of the population with jobs increased two-tenths of a percentage point to a high of 62.1 percent. Over the past year, civilian employment has increased by 3.1 million. Hispanics, who make up about 7 percent of employed persons, accounted for more than 20 percent of the over-the-year gain. (See tables A-2 and A-3.)

The civilian labor force expanded by 450,000 in January to a seasonally adjusted level of 121.2 million. The labor force has grown by

2.0 million over the past year, with the labor force participation rate rising to a record 65.9 percent in January. (See table A-2.)

Industry Payroll Employment (Establishment Survey Data)

Nonagricultural payroll employment edged up by 105,000 in January to a seasonally adjusted level of 103.7 million. In the prior 3 months, the month-to-month gains had averaged nearly 400,000. (See table B-1.)

Table A. Major indicators of labor market activity, seasonally adjusted

Category	Quarterly averages		Monthly data			Dec.-Jan. change
	1987		1987		1988	
	III	IV	Nov.	Dec.	Jan.	
HOUSEHOLD DATA						
	Thousands of persons					
Labor force 1/.........	121,786	122,316	122,349	122,472	122,924	452
Total employment 1/..	114,587	115,235	115,259	115,494	115,878	384
Civilian labor force...	120,053	120,568	120,594	120,722	121,175	453
Civilian employment..	112,854	113,486	113,504	113,744	114,129	385
Unemployment.........	7,199	7,082	7,090	6,978	7,046	68
Not in labor force.....	62,963	62,899	62,876	62,898	62,647	-251
Discouraged workers..	992	910	N.A.	N.A.	N.A.	N.A.
	Percent of labor force					
Unemployment rates:						
All workers 1/.......	5.9	5.8	5.8	5.7	5.7	0
All civilian workers.	6.0	5.9	5.9	5.8	5.8	0
Adult men..........	5.2	5.0	5.0	4.9	5.1	0.2
Adult women........	5.3	5.2	5.2	5.2	5.1	-.1
Teenagers..........	16.1	16.6	16.6	16.1	16.0	-.1
White..............	5.1	5.0	5.1	4.9	5.0	.1
Black..............	12.5	12.2	12.2	12.2	12.2	0
Hispanic origin....	8.1	8.5	9.0	8.1	7.2	-.9
ESTABLISHMENT DATA						
	Thousands of jobs					
Nonfarm employment.....	102,278	p103,288	103,285	p103,596	p103,703	p107
Goods-producing......	24,884	p25,164	25,169	p25,258	p25,219	p-39
Service-producing....	77,394	p78,124	78,116	p78,338	p78,484	p146
	Hours of work					
Average weekly hours:						
Total private........	34.8	p34.8	34.9	p34.7	p34.7	p0
Manufacturing........	40.9	p41.2	41.2	p41.0	p41.1	p0.1
Overtime............	3.7	p3.9	3.9	p3.9	p3.9	p0

1/ Includes the resident Armed Forces. N.A.=not available.
p=preliminary.

In the service-producing sector, the usually robust services industry grew by only 30,000, whereas retail trade showed a large increase of 155,000, after seasonal adjustment. The developments in retail trade reflect the fact that fewer workers than normal lost their jobs in post-holiday cutbacks. Wholesale trade continued to grow in January, adding 20,000 jobs. Government employment fell by 65,000, returning to the November level. Employment in finance, insurance, and real estate has shown little change since October.

Manufacturing exhibited only moderate growth in January, adding 25,000 jobs. While durable goods industries related to construction and auto manufacturing demonstrated weakness, machinery and electrical equipment continued to increase. Within nondurable industries, job gains in printing and publishing and the volatile food industry were partly offset by losses in textiles and apparel. Factory job gains had averaged 60,000 per month in the second half of last year. Elsewhere in the goods-producing sector, there was a seasonally adjusted drop of 15,000 in mining, most of it in oil and gas extraction, while construction employment, which had shown strength in the October-to-December period, fell 50,000.

Weekly Hours (Establishment Survey Data)

The average workweek of production or nonsupervisory workers on private nonagricultural payrolls was unchanged in January at 34.7 hours, seasonally adjusted. The manufacturing workweek edged up by a tenth of an hour to 41.1 hours, and factory overtime (3.9 hours) remained very high. (See table B-2.)

The index of aggregate weekly hours of production or nonsupervisory workers on private nonagricultural payrolls rose by 0.2 percent to 122.2 (1977=100), seasonally adjusted. The manufacturing index, at 95.4, was little changed from December. (See table B-5.)

Hourly and Weekly Earnings (Establishment Survey Data)

Both average hourly and weekly earnings rose by 0.4 percent in January, seasonally adjusted. Prior to seasonal adjustment, average hourly earnings rose by 6 cents to $9.18; average weekly earnings, however, fell $2.50 to $315.79, as a result of a seasonal decline in the workweek. (See table B-3.)

The Hourly Earnings Index (Establishment Survey Data)

The Hourly Earnings Index (HEI) was 176.3 (1977=100) in January, seasonally adjusted, an increase of 0.5 percent from December. For the 12 months ended in January, the increase was 2.9 percent. In dollars of constant purchasing power, the HEI decreased 1.8 percent during the 12-month period ending in December. The HEI excludes the effects of two types of changes unrelated to underlying wage rate movements--fluctuations in manufacturing overtime and interindustry employment shifts. (See table B-4.)

The Employment Situation for February 1988 will be released on Friday, March 4, at 8:30 A.M. (EST).

Explanatory Note

This news release presents statistics from two major surveys, the Current Population Survey (household survey) and the Current Employment Statistics Survey (establishment survey). The household survey provides the information on the labor force, total employment, and unemployment that appears in the A tables, marked HOUSEHOLD DATA. It is a sample survey of about 59,500 households that is conducted by the Bureau of the Census with most of the findings analyzed and published by the Bureau of Labor Statistics (BLS).

The establishment survey provides the information on the employment, hours, and earnings of workers on nonagricultural payrolls that appears in the B tables, marked ESTABLISHMENT DATA. This information is collected from payroll records by BLS in cooperation with State agencies. The sample includes over 290,000 establishments employing over 38 million people.

For both surveys, the data for a given month are actually collected for and relate to a particular week. In the household survey, unless otherwise indicated, it is the calendar week that contains the 12th day of the month, which is called the survey week. In the establishment survey, the reference week is the pay period including the 12th, which may or may not correspond directly to the calendar week.

The data in this release are affected by a number of technical factors, including definitions, survey differences, seasonal adjustments, and the inevitable variance in results between a survey of a sample and a census of the entire population. Each of these factors is explained below.

Coverage, definitions, and differences between surveys

The sample households in the household survey are selected so as to reflect the entire civilian noninstitutional population 16 years of age and older. Each person in a household is classified as employed, unemployed, or not in the labor force. Those who hold more than one job are classified according to the job at which they worked the most hours.

People are classified as *employed* if they did any work at all as paid civilians; worked in their own business or profession or on their own farm; or worked 15 hours or more in an enterprise operated by a member of their family, whether they were paid or not. People are also counted as employed if they were on unpaid leave because of illness, bad weather, disputes between labor and management, or personal reasons. Members of the Armed Forces stationed in the United States are also included in the employed total.

People are classified as *unemployed,* regardless of their eligibility for unemployment benefits or public assistance, if they meet all of the following criteria: They had no employment during the survey week; they were available for work at that time; and they made specific efforts to find employment sometime during the prior 4 weeks. Persons laid off from their former jobs and awaiting recall and those expecting to report to a job within 30 days need not be looking for work to be counted as unemployed.

The *labor force* equals the sum of the number employed and the number unemployed. The *unemployment rate* is the percentage of unemployed people in the labor force (civilian plus the resident Armed Forces). Table A-5 presents a special grouping of seven measures of unemployment based on varying definitions of unemployment and the labor force. The definitions are provided in the table. The most restrictive definition yields U-1 and the most comprehensive yields U-7. The overall unemployment rate is U-5a, while U-5b represents the same measure with a civilian labor force base.

Unlike the household survey, the establishment survey only counts wage and salary employees whose names appear on the payroll records of nonagricultural firms. As a result, there are many differences between the two surveys, among which are the following:

— The household survey, although based on a smaller sample, reflects a larger segment of the population; the establishment survey excludes agriculture, the self-employed, unpaid family workers, private household workers, and members of the resident Armed Forces;

— The household survey includes people on unpaid leave among the employed; the establishment survey does not;

— The household survey is limited to those 16 years of age and older; the establishment survey is not limited by age;

— The household survey has no duplication of individuals, because each individual is counted only once; in the establishment survey, employees working at more than one job or otherwise appearing on more than one payroll would be counted separately for each appearance.

Other differences between the two surveys are described in "Comparing Employment Estimates from Household and Payroll Surveys," which may be obtained from the BLS upon request.

Seasonal adjustment

Over the course of a year, the size of the Nation's labor force and the levels of employment and unemployment undergo sharp fluctuations due to such seasonal events as changes in weather, reduced or expanded production, harvests, major holidays, and the opening and closing of schools. For example, the labor force increases by a large number each June, when schools close and many young people enter the job market. The effect of such seasonal variation can be very large; over the course of a year, for example, seasonality may account for as much as 95 percent of the month-to-month changes in unemployment.

Because these seasonal events follow a more or less regular pattern each year, their influence on statistical trends can be eliminated by adjusting the statistics from month to month. These adjustments make nonseasonal developments, such as declines in economic activity or increases in the participation of women in the labor force, easier to spot. To return to the school's-out example, the large number of people entering the labor force each June is likely to obscure any other changes that have taken place since May, making it difficult to determine if the level of economic activity has risen or declined. However, because the effect of students finishing school in previous years is known, the statistics for the current year can be adjusted to allow for a comparable change. Insofar as the seasonal adjustment is made correctly, the adjusted figure provides a more useful tool with which to analyze changes in economic activity.

Measures of labor force, employment, and unemployment contain components such as age and sex. Statistics for all employees, production workers, average weekly hours, and average hourly earnings include components based on the employer's industry. All these statistics can be seasonally adjusted either by adjusting the total or by adjusting each of the components and combining them. The second procedure usually yields more accurate information and is therefore followed by BLS. For example, the seasonally adjusted figure for the labor force is the sum of eight seasonally adjusted civilian employment components, plus the resident Armed Forces total (not adjusted for seasonality), and four seasonally adjusted unemployment components; the total for unemployment is the sum of the four unemployment components; and the overall unemployment rate is derived by dividing the resulting estimate of total unemployment by the estimate of the labor force.

The numerical factors used to make the seasonal adjustments are recalculated regularly. For the household survey, the factors are calculated for the January-June period and again for the July-December period. The January revision is applied to data that have been published over the previous 5 years. For the establishment survey, updated factors for seasonal adjustment are calculated only once a year, along with the introduction of new benchmarks which are discussed at the end of the next section.

Sampling variability

Statistics based on the household and establishment surveys are subject to sampling error, that is, the estimate of the number of people employed and the other estimates drawn from these surveys probably differ from the figures that would be obtained from a complete census, even if the same questionnaires and procedures were used. In the household survey, the amount of the differences can be expressed in terms of standard errors. The numerical value of a standard error depends upon the size of the sample, the results of the survey, and other factors. However, the numerical value is always such that the chances are approximately 68 out of 100 that an estimate based on the sample will differ by no more than the standard error from the results of a complete census. The chances are approximately 90 out of 100 that an estimate based on the sample will differ by no more than 1.6 times the standard error from the results of a complete census. At approximately the 90-percent level of confidence—the confidence limits used by BLS in its analyses—the error for the monthly change in total employment is on the order of plus or minus 328,000; for total unemployment it is 220,000; and, for the overall unemployment rate, it is 0.19 percentage point. These figures do not mean that the sample results are off by these magnitudes but, rather, that the chances are approximately 90 out of 100 that the "true" level or rate would not be expected to differ from the estimates by more than these amounts.

Sampling errors for monthly surveys are reduced when the data are cumulated for several months, such as quarterly or annually. Also, as a general rule, the smaller the estimate, the larger the sampling error. Therefore, relatively speaking, the estimate of the size of the labor force is subject to less error than is the estimate of the number unemployed. And, among the unemployed, the sampling error for the jobless rate of adult men, for example, is much smaller than is the error for the jobless rate of teenagers. Specifically, the error on monthly change in the jobless rate for men is .26 percentage point; for teenagers, it is 1.25 percentage points.

In the establishment survey, estimates for the 2 most current months are based on incomplete returns; for this reason, these estimates are labeled preliminary in the tables. When all the returns in the sample have been received, the estimates are revised. In other words, data for the month of September are published in preliminary form in October and November and in final form in December. To remove errors that build up over time, a comprehensive count of the employed is conducted each year. The results of this survey are used to establish new benchmarks—comprehensive counts of employment—against which month-to-month changes can be measured. The new benchmarks also incorporate changes in the classification of industries and allow for the formation of new establishments.

Additional statistics and other information

In order to provide a broad view of the Nation's employment situation, BLS regularly publishes a wide variety of data in this news release. More comprehensive statistics are contained in *Employment and Earnings*, published each month by BLS. It is available for $8.50 per issue or $22.00 per year from the U.S. Government Printing Office, Washington, D.C., 20204. A check or money order made out to the Superintendent of Documents must accompany all orders.

Employment and Earnings also provides approximations of the standard errors for the household survey data published in this release. For unemployment and other labor force categories, the standard errors appear in tables B through J of its "Explanatory Notes." Measures of the reliability of the data drawn from the establishment survey and the actual amounts of revision due to benchmark adjustments are provided in tables M, O, P, and Q of that publication.

Table A-1. Employment status of the population, including Armed Forces in the United States, by sex

(Numbers in thousands)

Employment status and sex	Not seasonally adjusted			Seasonally adjusted[1]					
	Jan. 1987	Dec. 1987	Jan. 1988	Jan. 1987	Sept. 1987	Oct. 1987	Nov. 1987	Dec. 1987	Jan. 1988
TOTAL									
Noninstitutional population[2]	183,575	185,370	185,571	183,575	184,904	185,052	185,225	185,370	185,571
Labor force[2]	119,451	121,956	121,491	120,726	121,706	122,128	122,349	122,472	122,924
Participation rate[3]	65.1	65.8	65.5	65.8	65.8	66.0	66.1	66.1	66.2
Total employed[2]	110,832	115,429	113,888	112,762	114,615	114,951	115,259	115,494	115,878
Employment-population ratio[4]	60.4	62.3	61.4	61.4	62.0	62.1	62.2	62.3	62.4
Resident Armed Forces	1,748	1,750	1,749	1,748	1,743	1,741	1,755	1,750	1,749
Civilian employed	109,084	113,679	112,139	111,014	112,872	113,210	113,504	113,744	114,129
Agriculture	2,705	2,874	2,789	3,174	3,184	3,249	3,172	3,215	3,293
Nonagricultural industries	106,379	110,805	109,350	107,840	109,688	109,961	110,332	110,529	110,836
Unemployed	8,620	6,526	7,603	7,964	7,091	7,177	7,090	6,978	7,046
Unemployment rate[5]	7.2	5.4	6.3	6.6	5.8	5.9	5.8	5.7	5.7
Not in labor force	64,124	63,414	64,079	62,849	63,198	62,924	62,876	62,898	62,647
Men, 16 years and over									
Noninstitutional population[2]	88,020	88,924	89,033	88,020	88,683	88,756	88,849	88,924	89,033
Labor force[2]	66,880	67,565	67,410	67,602	67,776	67,947	68,019	68,030	68,243
Participation rate[3]	76.0	76.0	75.7	76.8	76.4	76.6	76.6	76.5	76.6
Total employed[2]	61,828	63,854	63,046	63,153	63,949	64,048	64,174	64,245	64,396
Employment-population ratio[4]	70.2	71.8	70.8	71.7	72.1	72.2	72.2	72.2	72.3
Resident Armed Forces	1,591	1,589	1,588	1,591	1,581	1,580	1,593	1,589	1,588
Civilian employed	60,237	62,265	61,458	61,562	62,368	62,468	62,581	62,656	62,808
Unemployed	5,052	3,711	4,364	4,449	3,827	3,899	3,845	3,785	3,847
Unemployment rate[5]	7.6	5.5	6.5	6.6	5.6	5.7	5.7	5.6	5.6
Women, 16 years and over									
Noninstitutional population[2]	95,556	96,446	96,538	95,556	96,221	96,295	96,376	96,446	96,538
Labor force[2]	52,571	54,391	54,082	53,124	53,930	54,181	54,330	54,442	54,681
Participation rate[3]	55.0	56.4	56.0	55.6	56.0	56.3	56.4	56.4	56.6
Total employed[2]	49,003	51,575	50,842	49,609	50,666	50,903	51,085	51,249	51,482
Employment-population ratio[4]	51.3	53.5	52.7	51.9	52.7	52.9	53.0	53.1	53.3
Resident Armed Forces	157	161	161	157	162	161	162	161	161
Civilian employed	48,846	51,414	50,681	49,452	50,504	50,742	50,923	51,088	51,321
Unemployed	3,568	2,816	3,239	3,515	3,264	3,278	3,245	3,193	3,200
Unemployment rate[5]	6.8	5.2	6.0	6.6	6.1	6.1	6.0	5.9	5.9

---

[1] The population and Armed Forces figures are not adjusted for seasonal variation; therefore, identical numbers appear in the unadjusted and seasonally adjusted columns.

[2] Includes members of the Armed Forces stationed in the United States.

[3] Labor force as a percent of the noninstitutional population.

[4] Total employment as a percent of the noninstitutional population.

[5] Unemployment as a percent of the labor force (including the resident Armed Forces).

Table A-2. Employment status of the civilian population by sex and age

(Numbers in thousands)

Employment status, sex, and age	Not seasonally adjusted			Seasonally adjusted					
	Jan. 1987	Dec. 1987	Jan. 1988	Jan. 1987	Sept. 1987	Oct. 1987	Nov. 1987	Dec. 1987	Jan. 1988
TOTAL									
Civilian noninstitutional population	181,827	183,620	183,822	181,827	183,161	183,311	183,470	183,620	183,822
Civilian labor force	117,703	120,206	119,742	118,978	119,963	120,387	120,594	120,722	121,175
Participation rate	64.7	65.5	65.1	65.4	65.5	65.7	65.7	65.7	65.9
Employed	109,084	113,679	112,139	111,014	112,872	113,210	113,504	113,74[illegible]	114,129
Employment-population ratio[2]	60.0	61.9	61.0	61.1	61.6	61.8	61.9	61.9	62.1
Unemployed	8,620	6,526	7,603	7,964	7,091	7,177	7,090	6,978	7,046
Unemployment rate	7.3	5.4	6.3	6.7	5.9	6.0	5.9	5.8	5.8
Men, 20 years and over									
Civilian noninstitutional population	79,132	80,002	80,120	79,132	79,740	79,807	79,885	80,002	80,120
Civilian labor force	61,586	62,075	62,031	61,911	62,085	62,211	62,299	62,248	62,440
Participation rate	77.8	77.6	77.4	78.2	77.9	78.0	78.0	77.8	77.9
Employed	57,290	59,035	58,357	58,220	58,967	59,037	59,164	59,185	59,287
Employment-population ratio[2]	72.4	73.8	72.8	73.6	73.9	74.0	74.1	74.0	74.0
Agriculture	2,044	2,121	2,077	2,287	2,345	2,343	2,297	2,298	2,323
Nonagricultural industries	55,246	56,914	56,280	55,933	56,622	56,694	56,867	56,887	56,964
Unemployed	4,297	3,040	3,674	3,691	3,118	3,174	3,135	3,063	3,154
Unemployment rate	7.0	4.9	5.9	6.0	5.0	5.1	5.0	4.9	5.1
Women, 20 years and over									
Civilian noninstitutional population	88,150	89,010	89,110	88,150	88,785	88,843	88,923	89,010	89,110
Civilian labor force	48,966	50,492	50,317	49,167	49,922	50,095	50,254	50,361	50,558
Participation rate	55.5	56.7	56.5	55.8	56.2	56.4	56.5	56.6	56.7
Employed	45,970	48,146	47,633	46,290	47,251	47,480	47,634	47,750	47,977
Employment-population ratio[2]	52.1	54.1	53.5	52.5	53.2	53.4	53.6	53.6	53.8
Agriculture	520	578	539	625	600	636	636	643	646
Nonagricultural industries	45,450	47,568	47,094	45,665	46,651	46,844	46,998	47,107	47,331
Unemployed	2,996	2,346	2,684	2,877	2,671	2,615	2,620	2,611	2,581
Unemployment rate	6.1	4.6	5.3	5.9	5.4	5.2	5.2	5.2	5.1
Both sexes, 16 to 19 years									
Civilian noninstitutional population	14,545	14,609	14,592	14,545	14,637	14,661	14,683	14,609	14,592
Civilian labor force	7,149	7,639	7,394	7,900	7,956	8,081	8,041	8,113	8,177
Participation rate	49.2	52.3	50.7	54.3	54.4	55.1	54.8	55.5	56.0
Employed	5,823	6,498	6,150	6,504	6,654	6,693	6,706	6,809	6,865
Employment-population ratio[2]	40.0	44.5	42.1	44.7	45.5	45.7	45.7	46.6	47.0
Agriculture	141	175	173	262	239	270	239	274	323
Nonagricultural industries	5,682	6,323	5,977	6,242	6,415	6,423	6,467	6,535	6,542
Unemployed	1,326	1,141	1,244	1,396	1,302	1,388	1,335	1,304	1,312
Unemployment rate	18.5	14.9	16.8	17.7	16.4	17.2	16.6	16.1	16.0

---

[1] The population figures are not adjusted for seasonal variation; therefore, identical numbers appear in the unadjusted and seasonally adjusted columns.

[2] Civilian employment as a percent of the civilian noninstitutional population.

Table A-3. Employment status of the civilian population by race, sex, age, and Hispanic origin

(Numbers in thousands)

Employment status, race, sex, age, and Hispanic origin	Not seasonally adjusted			Seasonally adjusted					
	Jan. 1987	Dec. 1987	Jan. 1988	Jan. 1987	Sept. 1987	Oct. 1987	Nov. 1987	Dec. 1987	Jan. 1988
WHITE									
Civilian noninstitutional population	156,313	157,552	157,676	156,313	157,242	157,342	157,449	157,552	157,676
Civilian labor force	101,852	103,443	103,120	102,669	103,357	103,669	103,731	103,907	104,252
Participation rate	65.2	65.7	65.4	65.7	65.7	65.9	65.9	66.0	66.1
Employed	95,026	98,639	97,311	96,749	98,069	98,317	98,492	98,779	99,044
Employment-population ratio[2]	60.8	62.6	61.7	61.9	62.4	62.5	62.6	62.7	62.8
Unemployed	6,826	4,804	5,809	5,920	5,288	5,352	5,239	5,128	5,208
Unemployment rate	6.7	4.6	5.6	5.8	5.1	5.2	5.1	4.9	5.0
Men, 20 years and over									
Civilian labor force	53,889	54,197	54,135	54,114	54,213	54,375	54,381	54,368	54,455
Participation rate	78.3	78.0	77.8	78.6	78.2	78.4	78.3	78.2	78.3
Employed	50,476	51,873	51,220	51,296	51,803	51,864	51,969	52,046	52,053
Employment-population ratio[2]	73.3	74.6	73.6	74.5	74.7	74.8	74.9	74.9	74.8
Unemployed	3,413	2,323	2,914	2,818	2,410	2,511	2,412	2,322	2,402
Unemployment rate	6.3	4.3	5.4	5.2	4.4	4.6	4.4	4.3	4.4
Women, 20 years and over									
Civilian labor force	41,535	42,659	42,545	41,677	42,308	42,379	42,464	42,569	42,710
Participation rate	55.0	56.0	55.8	55.2	55.7	55.7	55.8	55.9	56.1
Employed	39,331	41,004	40,610	39,613	40,409	40,538	40,606	40,712	40,896
Employment-population ratio[2]	52.1	53.8	53.3	52.4	53.2	53.3	53.4	53.5	53.7
Unemployed	2,204	1,655	1,935	2,064	1,899	1,841	1,858	1,857	1,813
Unemployment rate	5.3	3.9	4.5	5.0	4.5	4.3	4.4	4.4	4.2
Both sexes, 16 to 19 years									
Civilian labor force	6,237	6,587	6,441	6,878	6,836	6,915	6,886	6,970	7,087
Participation rate	52.4	55.3	54.2	57.8	57.2	57.9	57.7	58.6	59.6
Employed	5,229	5,761	5,481	5,840	5,857	5,915	5,917	6,021	6,095
Employment-population ratio[2]	43.9	48.4	46.1	49.1	49.0	49.5	49.6	50.6	51.2
Unemployed	1,009	826	960	1,038	979	1,000	969	949	992
Unemployment rate	16.2	12.5	14.9	15.1	14.3	14.5	14.1	13.6	14.0
Men	18.4	15.0	16.3	16.1	15.1	15.1	14.8	14.9	14.4
Women	13.8	10.0	13.4	14.0	13.4	13.8	13.3	12.3	13.6
BLACK									
Civilian noninstitutional population	20,187	20,508	20,539	20,187	20,426	20,453	20,482	20,508	20,539
Civilian labor force	12,558	13,127	12,967	12,807	13,028	13,152	13,193	13,215	13,222
Participation rate	62.2	64.0	63.1	63.4	63.8	64.3	64.4	64.4	64.4
Employed	10,809	11,631	11,417	10,995	11,421	11,556	11,589	11,605	11,608
Employment-population ratio[2]	53.5	56.7	55.6	54.5	55.9	56.5	56.6	56.6	56.5
Unemployed	1,749	1,496	1,550	1,812	1,607	1,596	1,604	1,610	1,614
Unemployment rate	13.9	11.4	12.0	14.1	12.3	12.1	12.2	12.2	12.2
Men, 20 years and over									
Civilian labor force	5,911	6,026	6,029	5,988	6,032	6,023	6,045	6,043	6,115
Participation rate	73.9	74.1	74.0	74.9	74.5	74.3	74.5	74.3	75.0
Employed	5,167	5,430	5,398	5,261	5,421	5,431	5,430	5,430	5,497
Employment-population ratio[2]	64.6	66.8	66.2	65.8	67.0	67.0	66.9	66.8	67.5
Unemployed	744	595	631	727	611	592	615	613	618
Unemployment rate	12.6	9.9	10.5	12.1	10.1	9.8	10.2	10.1	10.1
Women, 20 years and over									
Civilian labor force	5,913	6,241	6,189	5,969	6,067	6,177	6,207	6,224	6,244
Participation rate	58.9	61.2	60.6	59.4	59.7	60.7	60.9	61.0	61.1
Employed	5,195	5,626	5,528	5,217	5,357	5,495	5,537	5,544	5,550
Employment-population ratio[2]	51.7	55.1	54.1	51.9	52.7	54.0	54.3	54.3	54.3
Unemployed	718	615	661	752	710	682	670	680	694
Unemployment rate	12.1	9.9	10.7	12.6	11.7	11.0	10.8	10.9	11.1
Both sexes, 16 to 19 years									
Civilian labor force	734	860	749	850	929	952	941	948	863
Participation rate	34.2	39.6	34.5	39.6	42.8	43.8	43.3	43.7	39.8
Employed	447	575	492	517	643	630	622	631	561
Employment-population ratio[2]	20.8	26.5	22.7	24.1	29.6	29.0	28.6	29.1	25.8
Unemployed	287	285	257	333	286	322	319	317	302
Unemployment rate	39.1	33.2	34.4	39.2	30.8	33.8	33.9	33.4	35.0
Men	36.9	35.1	35.2	36.5	31.5	32.5	32.2	33.5	35.1
Women	41.7	31.2	33.5	42.3	30.0	35.2	35.8	33.4	34.9

See footnotes at end of table.

Table A-3. Employment status of the civilian population by race, sex, age, and Hispanic origin—Continued

(Numbers in thousands)

Employment status, race, sex, age, and Hispanic origin	Not seasonally adjusted			Seasonally adjusted[1]					
	Jan. 1987	Dec. 1987	Jan. 1988	Jan. 1987	Sept. 1987	Oct. 1987	Nov. 1987	Dec. 1987	Jan. 1988
HISPANIC ORIGIN									
Civilian noninstitutional population	12,653	13,082	13,115	12,653	12,985	13,003	13,043	13,082	13,115
Civilian labor force	8,310	8,685	8,758	8,387	8,581	8,654	8,763	8,772	8,879
Participation rate	65.7	66.4	66.8	66.3	66.2	66.6	67.2	67.1	67.7
Employed	7,357	8,002	8,040	7,533	7,877	7,935	7,978	8,058	8,238
Employment-population ratio[2]	58.1	61.2	61.3	59.5	60.8	61.0	61.2	61.6	62.8
Unemployed	953	684	718	854	704	719	785	714	642
Unemployment rate	11.5	7.9	8.2	10.2	8.2	8.3	9.0	8.1	7.2

[1] The population figures are not adjusted for seasonal variation; therefore, identical numbers appear in the unadjusted and seasonally adjusted columns.

[2] Civilian employment as a percent of the civilian noninstitutional population.

NOTE: Detail for the above race and Hispanic-origin groups will not sum to totals because data for the "other races" group are not presented and Hispanics are included in both the white and black population groups.

Table A-4. Selected employment indicators

(In thousands)

Category	Not seasonally adjusted			Seasonally adjusted					
	Jan. 1987	Dec. 1987	Jan. 1988	Jan. 1987	Sept. 1987	Oct. 1987	Nov. 1987	Dec. 1987	Jan. 1988
CHARACTERISTIC									
Civilian employed, 16 years and over	109,084	113,679	112,139	111,014	112,872	113,210	113,504	113,744	114,129
Married men, spouse present	39,621	40,707	40,000	40,047	40,404	40,556	40,645	40,711	40,404
Married women, spouse present	27,470	28,814	28,185	27,713	28,089	28,099	28,175	28,249	28,441
Women who maintain families	5,981	6,239	6,174	5,958	6,151	6,178	6,237	6,227	6,188
MAJOR INDUSTRY AND CLASS OF WORKER									
Agriculture:									
Wage and salary workers	1,335	1,403	1,388	1,635	1,624	1,705	1,595	1,599	1,686
Self-employed workers	1,271	1,350	1,325	1,392	1,415	1,430	1,407	1,450	1,454
Unpaid family workers	99	121	95	143	139	140	155	156	138
Nonagricultural industries:									
Wage and salary workers	98,100	102,239	101,065	99,557	101,282	101,522	101,943	101,997	102,507
Government	16,510	17,206	17,214	16,492	16,928	17,033	17,118	17,064	17,197
Private industries	81,591	85,033	83,851	83,065	84,354	84,489	84,825	84,933	85,310
Private households	1,160	1,135	1,071	1,245	1,100	1,222	1,286	1,200	1,147
Other industries	80,431	83,898	82,780	81,820	83,254	83,267	83,539	83,733	84,163
Self-employed workers	8,045	8,317	8,060	8,136	8,204	8,274	8,222	8,280	8,150
Unpaid family workers	233	249	228	245	297	242	235	248	237
PERSONS AT WORK PART TIME[1]									
All industries:									
Part time for economic reasons	5,538	5,168	5,394	5,508	5,261	5,353	5,534	5,262	5,367
Slack work	2,770	2,327	2,683	2,467	2,213	2,377	2,408	2,284	2,396
Could only find part-time work	2,479	2,517	2,405	2,721	2,683	2,655	2,696	2,638	2,640
Voluntary part time	14,453	15,691	14,906	14,147	14,415	14,488	14,523	14,711	14,571
Nonagricultural industries:									
Part time for economic reasons	5,263	4,910	5,191	5,211	4,986	5,067	5,241	5,004	5,145
Slack work	2,557	2,133	2,527	2,279	2,034	2,198	2,209	2,111	2,260
Could only find part-time work	2,425	2,462	2,363	2,631	2,603	2,557	2,597	2,552	2,586
Voluntary part time	14,080	15,238	14,491	13,706	13,987	14,011	14,084	14,222	14,096

[1] Excludes persons "with a job but not at work" during the survey period for such reasons as vacation, illness, or industrial dispute.

Table A-5. Range of unemployment measures based on varying definitions of unemployment and the labor force, seasonally adjusted

(Percent)

Measure	Quarterly averages					Monthly data		
	1986	1987				1987		1988
	IV	I	II	III	IV	Nov.	Dec.	Jan.
U-1 Persons unemployed 15 weeks or longer as a percent of the civilian labor force	1.9	1.8	1.7	1.6	1.5	1.5	1.5	1.4
U-2 Job losers as a percent of the civilian labor force	3.3	3.2	3.0	2.8	2.7	2.7	2.7	2.6
U-3 Unemployed persons 25 years and over as a percent of the civilian labor force	5.4	5.1	4.8	4.6	4.5	4.5	4.5	4.5
U-4 Unemployed full-time jobseekers as a percent of the full-time civilian labor force	6.5	6.2	5.9	5.8	5.5	5.5	5.4	5.4
U-5a Total unemployed as a percent of the labor force, including the resident Armed Forces	6.8	6.5	6.2	5.9	5.8	5.8	5.7	5.7
U-5b Total unemployed as a percent of the civilian labor force	6.8	6.6	6.3	6.0	5.9	5.9	5.8	5.8
U-6 Total full-time jobseekers plus 1/2 part-time jobseekers plus 1/2 total on part time for economic reasons as a percent of the civilian labor force less 1/2 of the part-time labor force	9.2	9.0	8.5	8.2	8.1	8.2	8.0	8.0
U-7 Total full-time jobseekers plus 1/2 part-time jobseekers plus 1/2 total on part time for economic reasons plus discouraged workers as a percent of the civilian labor force plus discouraged workers less 1/2 of the part-time labor force	10.2	9.9	9.3	9.0	8.8	N.A.	N.A.	N.A.

N.A. = not available.

Table A-6. Selected unemployment indicators, seasonally adjusted

Category	Number of unemployed persons (in thousands)			Unemployment rates[1]					
	Jan. 1987	Dec. 1987	Jan. 1988	Jan. 1987	Sept. 1987	Oct. 1987	Nov. 1987	Dec. 1987	Jan. 1988
CHARACTERISTIC									
Total, 16 years and over	7,954	6,978	7,046	6.7	5.9	6.0	5.9	5.8	5.8
Men, 16 years and over	4,449	3,785	3,847	6.7	5.8	5.9	5.8	5.7	5.8
Men, 20 years and over	3,691	3,063	3,154	6.0	5.0	5.1	5.0	4.9	5.1
Women, 16 years and over	3,515	3,193	3,200	6.6	6.1	6.1	6.0	5.9	5.9
Women, 20 years and over	2,877	2,611	2,581	5.9	5.4	5.2	5.2	5.2	5.1
Both sexes, 16 to 19 years	1,396	1,304	1,312	17.7	16.4	17.2	16.6	16.1	16.0
Married men, spouse present	1,765	1,441	1,495	4.2	3.7	3.7	3.5	3.4	3.6
Married women, spouse present	1,371	1,275	1,239	4.7	4.2	4.2	4.2	4.3	4.2
Women who maintain families	645	568	605	9.8	8.8	8.9	8.5	8.4	8.9
Full-time workers	6,473	5,601	5,603	6.3	5.5	5.6	5.5	5.4	5.4
Part-time workers	1,510	1,396	1,464	8.9	8.4	8.3	8.2	8.0	8.3
Labor force time lost[2]	—	—	—	7.6	6.8	6.8	6.8	6.6	6.6
INDUSTRY									
Nonagricultural private wage and salary workers	5,969	5,096	5,291	6.7	5.9	5.9	5.8	5.7	5.8
Goods-producing industries	2,388	1,840	2,034	8.3	7.0	7.0	6.5	6.4	7.1
Mining	134	71	63	14.1	7.4	8.3	7.0	8.0	7.7
Construction	787	663	762	12.5	11.9	11.2	10.6	10.6	12.2
Manufacturing	1,467	1,106	1,209	6.8	5.6	5.7	5.3	5.1	5.6
Durable goods	889	606	704	6.8	5.4	5.2	4.8	4.8	5.5
Nondurable goods	578	500	505	6.7	5.9	6.5	5.9	5.8	5.8
Service-producing industries	3,581	3,256	3,257	6.0	5.3	5.4	5.5	5.3	5.3
Transportation and public utilities	292	289	231	4.7	4.1	4.4	4.5	4.6	3.6
Wholesale and retail trade	1,679	1,423	1,438	7.4	6.4	6.5	6.8	6.2	6.1
Finance and service industries	1,610	1,544	1,588	5.2	4.8	4.7	4.8	4.9	4.9
Government workers	605	565	529	3.5	3.4	3.3	3.4	3.2	3.0
Agricultural wage and salary workers	210	196	217	11.4	8.6	10.6	11.1	10.9	11.5

[1] Unemployment as a percent of the civilian labor force.

[2] Aggregate hours lost by the unemployed and persons on part time for economic reasons as a percent of potentially available labor force hours

Table A-7. Duration of unemployment

(Numbers in thousands)

Weeks of unemployment	Not seasonally adjusted			Seasonally adjusted					
	Jan. 1987	Dec. 1987	Jan. 1988	Jan. 1987	Sept. 1987	Oct. 1987	Nov. 1987	Dec. 1987	Jan. 1988
DURATION									
Less than 5 weeks	3,693	2,871	3,395	3,365	3,220	3,223	3,218	3,229	3,089
5 to 14 weeks	2,639	1,991	2,397	2,489	1,949	2,093	2,029	1,988	2,263
15 weeks and over	2,288	1,665	1,811	2,187	1,904	1,801	1,834	1,791	1,733
15 to 26 weeks	1,105	813	904	1,023	917	844	899	892	839
27 weeks and over	1,183	851	907	1,164	987	957	935	899	894
Average (mean) duration, in weeks	14.4	14.6	13.6	15.0	14.2	14.1	14.0	14.2	14.4
Median duration, in weeks	6.8	6.3	6.2	7.0	5.8	6.2	6.1	6.0	6.4
PERCENT DISTRIBUTION									
Total unemployed	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Less than 5 weeks	42.8	44.0	44.6	41.8	45.5	45.3	45.4	46.2	43.6
5 to 14 weeks	30.6	30.5	31.5	31.0	27.6	29.4	28.7	28.2	31.9
15 weeks and over	26.5	25.5	23.8	27.2	26.9	25.3	25.9	25.6	24.5
15 to 26 weeks	12.8	12.5	11.9	12.7	13.0	11.9	12.7	12.8	11.8
27 weeks and over	13.7	13.0	11.9	14.5	14.0	13.4	13.2	12.9	12.6

Table A-8. Reason for unemployment

(Numbers in thousands)

Reasons	Not seasonally adjusted			Seasonally adjusted					
	Jan. 1987	Dec. 1987	Jan. 1988	Jan. 1987	Sept. 1987	Oct. 1987	Nov. 1987	Dec. 1987	Jan. 1988
NUMBER OF UNEMPLOYED									
Job losers	4,662	3,206	3,770	3,971	3,313	3,388	3,307	3,200	3,209
On layoff	1,550	909	1,272	1,087	820	944	878	856	888
Other job losers	3,112	2,297	2,498	2,884	2,493	2,444	2,429	2,344	2,320
Job leavers	952	858	1,133	909	981	980	926	946	1,082
Reentrants	2,087	1,738	1,940	2,059	1,906	1,845	1,974	1,945	1,917
New entrants	918	727	759	1,048	882	914	855	909	885
PERCENT DISTRIBUTION									
Total unemployed	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Job losers	54.1	49.1	49.6	49.7	46.8	47.7	46.8	45.7	45.2
On layoff	18.0	13.9	16.7	13.6	11.6	13.3	12.4	12.2	12.5
Other job losers	36.1	35.2	32.9	36.1	35.2	34.4	34.4	33.5	32.7
Job leavers	11.0	13.1	14.9	11.4	13.8	13.5	13.1	13.5	15.3
Reentrants	24.2	26.6	25.5	25.8	26.9	26.0	28.0	27.8	27.0
New entrants	10.7	11.1	10.0	13.1	12.5	12.9	12.1	13.0	12.5
UNEMPLOYED AS A PERCENT OF THE CIVILIAN LABOR FORCE									
Job losers	3.9	2.7	3.2	3.3	2.8	2.8	2.7	2.7	2.6
Job leavers	.8	.7	.9	.8	.8	.8	.8	.8	.9
Reentrants	1.8	1.4	1.6	1.7	1.6	1.5	1.6	1.6	1.6
New entrants	.8	.6	.6	.9	.7	.8	.7	.8	.7

Table A-9. Unemployed persons by sex and age, seasonally adjusted

Sex and age	Number of unemployed persons (in thousands)			Unemployment rates[1]					
	Jan. 1987	Dec. 1987	Jan. 1988	Jan. 1987	Sept. 1987	Oct. 1987	Nov. 1987	Dec. 1987	Jan. 1988
Total, 16 years and over	7,964	6,959	7,046	6.7	5.9	6.0	5.9	5.8	5.8
16 to 24 years	3,029	2,547	2,659	13.0	11.8	11.8	11.6	11.2	11.6
16 to 19 years	1,396	1,304	1,312	17.7	16.4	17.2	16.6	16.1	16.0
16 to 17 years	670	613	638	19.9	18.3	20.4	19.2	17.8	18.7
18 to 19 years	738	688	674	16.2	15.2	14.7	14.8	14.7	14.5
20 to 24 years	1,633	1,243	1,347	10.7	9.4	8.8	8.9	8.5	9.1
25 years and over	4,942	4,412	4,393	5.2	4.6	4.6	4.5	4.5	4.5
25 to 54 years	4,478	3,939	3,896	5.5	4.8	4.8	4.7	4.8	4.7
55 years and over	491	488	527	3.3	3.3	3.1	3.4	3.2	3.5
Men, 16 years and over	4,449	3,768	3,847	6.7	5.8	5.9	5.8	5.7	5.8
16 to 24 years	1,623	1,378	1,456	13.4	12.1	12.1	12.0	11.7	12.2
16 to 19 years	758	722	693	18.5	17.3	17.4	17.2	17.2	16.4
16 to 17 years	368	347	348	21.1	19.7	20.9	20.4	19.3	19.4
18 to 19 years	404	367	345	17.1	15.9	14.8	14.8	15.3	14.9
20 to 24 years	865	656	763	10.8	9.3	9.2	9.2	8.7	8.9
25 years and over	2,824	2,390	2,391	5.2	4.5	4.5	4.4	4.4	4.4
25 to 54 years	2,529	2,112	2,070	5.6	4.7	4.8	4.6	4.6	4.5
55 years and over	321	282	351	3.7	3.2	3.1	3.5	3.2	4.0
Women, 16 years and over	3,515	3,191	3,200	6.6	6.1	6.1	6.0	5.9	5.9
16 to 24 years	1,406	1,169	1,203	12.7	11.5	11.5	11.2	10.7	10.9
16 to 19 years	638	582	619	16.9	15.4	16.9	16.0	14.9	15.6
16 to 17 years	302	266	290	18.6	16.9	19.9	17.9	16.2	17.9
18 to 19 years	334	321	329	15.3	14.4	14.6	14.7	14.1	14.1
20 to 24 years	768	587	584	10.5	9.4	8.5	8.6	8.4	8.2
25 years and over	2,118	2,022	2,002	5.1	4.7	4.7	4.7	4.7	4.6
25 to 54 years	1,949	1,827	1,826	5.5	4.9	4.9	4.9	4.9	4.9
55 years and over	170	206	175	2.8	3.5	3.1	3.2	3.3	2.9

[1] Unemployment as a percent of the civilian labor force.

Table A-10. Employment status of black and other workers

(Numbers in thousands)

Employment status	Not seasonally adjusted			Seasonally adjusted[1]					
	Jan. 1987	Dec. 1987	Jan. 1988	Jan. 1987	Sept. 1987	Oct. 1987	Nov. 1987	Dec. 1987	Jan. 1988
Civilian noninstitutional population	25,515	26,068	26,146	25,515	25,919	25,969	26,021	26,068	26,146
Civilian labor force	16,042	16,763	16,622	16,341	16,594	16,755	16,869	16,853	16,926
Participation rate	62.9	64.3	63.6	64.0	64.0	64.5	64.8	64.7	64.7
Employed	14,047	15,040	14,828	14,295	14,778	14,946	15,017	15,008	15,076
Employment-population ratio[2]	55.1	57.7	56.7	56.0	57.0	57.6	57.7	57.6	57.7
Unemployed	1,995	1,723	1,794	2,046	1,816	1,809	1,852	1,845	1,850
Unemployment rate	12.4	10.3	10.8	12.5	10.9	10.8	11.0	10.9	10.9
Not in labor force	9,473	9,305	9,524	9,174	9,325	9,214	9,152	9,215	9,220

[1] The population figures are not adjusted for seasonal variation; therefore, identical numbers appear in the unadjusted and seasonally adjusted columns.

[2] Civilian employment as a percent of the civilian noninstitutional population.

Table A-11. Occupational status of the employed and unemployed, not seasonally adjusted

(Numbers in thousands)

Occupation	Civilian employed		Unemployed		Unemployment rate[1]	
	Jan. 1987	Jan. 1988	Jan. 1987	Jan. 1988	Jan. 1987	Jan. 1988
Total, 16 years and over[1]	109,084	112,139	8,620	7,603	7.3	6.3
Managerial and professional specialty	27,180	28,503	704	615	2.5	2.1
Executive, administrative, and managerial	12,826	13,579	386	333	2.9	2.4
Professional specialty	14,333	14,925	319	281	2.2	1.9
Technical, sales, and administrative support	34,387	35,213	1,723	1,616	4.8	4.4
Technicians and related support	3,233	3,466	127	119	3.8	3.3
Sales occupations	13,073	13,269	751	749	5.4	5.3
Administrative support, including clerical	18,081	18,478	845	748	4.5	3.9
Service occupations	14,791	15,136	1,451	1,260	8.9	7.7
Private household	962	877	66	51	6.4	5.5
Protective service	1,844	1,912	121	89	6.2	4.5
Service, except private household and protective	11,985	12,347	1,264	1,120	9.5	8.3
Precision production, craft, and repair	13,279	13,193	1,153	980	8.0	6.9
Mechanics and repairers	4,412	4,297	240	183	5.2	4.1
Construction trades	4,729	4,826	643	564	12.0	10.5
Other precision production, craft, and repair	4,139	4,069	270	233	6.1	5.4
Operators, fabricators, and laborers	16,744	17,207	2,292	1,998	12.0	10.4
Machine operators, assemblers, and inspectors	7,602	7,926	941	779	11.0	9.0
Transportation and material moving occupations	4,580	4,644	517	440	10.1	8.7
Handlers, equipment cleaners, helpers, and laborers	4,562	4,636	834	779	15.5	14.4
Construction laborers	626	658	259	283	29.2	30.1
Other handlers, equipment cleaners, helpers, and laborers	3,936	3,979	575	495	12.7	11.1
Farming, forestry, and fishing	2,722	2,888	324	331	10.6	10.3

---

[1] Persons with no previous work experience and those whose last job was in the Armed Forces are included in the unemployed total.

Table A-12. Employment status of male Vietnam-era veterans and nonveterans by age, not seasonally adjusted

(Numbers in thousands)

Veteran status and age	Civilian noninstitutional population		Civilian labor force							
			Total		Employed		Unemployed			
							Number		Percent of labor force	
	Jan. 1987	Jan. 1988	Jan. 1987	Jan. 1988	Jan. 1987	Jan. 1988	Jan. 1987	Jan. 1988	Jan. 1987	Jan. 1988
VIETNAM-ERA VETERANS										
Total, 30 years and over	7,798	7,865	7,267	7,207	6,834	6,840	433	367	6.0	5.1
30 to 44 years	6,295	6,054	6,047	5,739	5,665	5,433	382	306	6.3	5.3
30 to 34 years	1,026	794	977	750	861	704	116	46	11.9	6.1
35 to 39 years	2,819	2,365	2,720	2,258	2,563	2,112	157	146	5.8	6.5
40 to 44 years	2,450	2,895	2,350	2,731	2,241	2,617	109	114	4.6	4.2
45 years and over	1,503	1,811	1,220	1,468	1,169	1,407	51	61	4.2	4.2
NONVETERANS										
Total, 30 to 44 years	18,986	19,996	18,023	18,801	16,893	17,879	1,130	922	6.3	4.9
30 to 34 years	8,698	8,981	8,271	8,499	7,717	8,019	554	480	6.7	5.6
35 to 39 years	5,993	6,598	5,684	6,201	5,344	5,942	340	259	6.0	4.2
40 to 44 years	4,295	4,417	4,068	4,101	3,832	3,918	236	183	5.8	4.5

NOTE: Male Vietnam-era veterans are men who served in the Armed Forces between August 5, 1964 and May 7, 1975. Nonveterans are men who have never served in the Armed Forces; published data are limited to those 30 to 44 years of age, the group that most closely corresponds to the bulk of the Vietnam-era veteran population.

Table A-13. Employment status of the civilian population for eleven large States

(Numbers in thousands)

State and employment status	Not seasonally adjusted			Seasonally adjusted					
	Jan. 1987	Dec. 1987	Jan. 1988	Jan. 1987	Sept. 1987	Oct. 1987	Nov. 1987	Dec. 1987	Jan. 1988
California									
Civilian noninstitutional population	20,318	20,751	20,787	20,318	20,639	20,678	20,714	20,751	20,787
Civilian labor force	13,351	13,862	13,924	13,403	13,815	13,784	13,912	13,950	13,981
Employed	12,436	13,185	13,145	12,559	13,027	12,984	13,172	13,221	13,267
Unemployed	915	677	780	844	788	800	740	729	714
Unemployment rate	6.9	4.9	5.6	6.3	5.7	5.8	5.3	5.2	5.1
Florida									
Civilian noninstitutional population	9,309	9,548	9,568	9,309	9,485	9,507	9,527	9,548	9,568
Civilian labor force	5,664	6,002	5,917	5,736	5,901	5,961	5,958	5,990	5,993
Employed	5,337	5,705	5,622	5,411	5,600	5,666	5,647	5,681	5,698
Unemployed	327	297	295	325	301	295	311	309	295
Unemployment rate	5.8	5.0	5.0	5.7	5.1	4.9	5.2	5.2	4.9
Illinois									
Civilian noninstitutional population	8,712	8,761	8,764	8,712	8,750	8,754	8,757	8,761	8,764
Civilian labor force	5,608	5,716	5,741	5,660	5,833	5,857	5,764	5,751	5,795
Employed	5,147	5,320	5,317	5,237	5,441	5,463	5,364	5,325	5,407
Unemployed	461	396	424	423	392	394	400	426	388
Unemployment rate	8.2	6.9	7.4	7.5	6.7	6.7	6.9	7.4	6.7
Massachusetts									
Civilian noninstitutional population	4,577	4,596	4,597	4,577	4,592	4,593	4,594	4,596	4,597
Civilian labor force	3,029	3,087	3,107	3,064	3,074	3,111	3,093	3,088	3,142
Employed	2,905	3,006	2,989	2,954	2,992	3,014	3,009	2,998	3,036
Unemployed	124	82	118	110	82	97	84	90	106
Unemployment rate	4.1	2.6	3.8	3.6	2.7	3.1	2.7	2.9	3.4
Michigan									
Civilian noninstitutional population	6,896	6,962	6,966	6,896	6,946	6,951	6,956	6,962	6,966
Civilian labor force	4,416	4,491	4,426	4,468	4,569	4,520	4,519	4,529	4,472
Employed	4,058	4,119	3,954	4,130	4,208	4,187	4,159	4,137	4,018
Unemployed	358	372	472	338	361	333	360	392	454
Unemployment rate	8.1	8.3	10.7	7.6	7.9	7.4	8.0	8.7	10.2
New Jersey									
Civilian noninstitutional population	5,980	6,021	6,024	5,980	6,011	6,015	6,018	6,021	6,024
Civilian labor force	3,829	3,954	3,965	3,897	3,933	3,985	3,994	4,005	4,037
Employed	3,654	3,813	3,786	3,748	3,762	3,825	3,847	3,848	3,884
Unemployed	175	142	179	149	171	160	147	157	153
Unemployment rate	4.6	3.6	4.5	3.8	4.3	4.0	3.7	3.9	3.8
New York									
Civilian noninstitutional population	13,737	13,766	13,768	13,737	13,763	13,765	13,766	13,766	13,768
Civilian labor force	8,486	8,526	8,523	8,488	8,421	8,476	8,553	8,512	8,524
Employed	7,963	8,171	8,096	7,989	8,037	8,066	8,112	8,127	8,120
Unemployed	523	356	427	499	384	410	441	385	404
Unemployment rate	6.2	4.2	5.0	5.9	4.6	4.8	5.2	4.5	4.7
North Carolina									
Civilian noninstitutional population	4,772	4,846	4,852	4,772	4,827	4,834	4,840	4,846	4,852
Civilian labor force	3,206	3,280	3,247	3,251	3,292	3,324	3,314	3,291	3,291
Employed	3,038	3,144	3,082	3,093	3,157	3,188	3,181	3,144	3,135
Unemployed	168	136	166	158	135	136	133	147	156
Unemployment rate	5.2	4.2	5.1	4.9	4.1	4.1	4.0	4.5	4.7
Ohio									
Civilian noninstitutional population	8,128	8,178	8,181	8,128	8,167	8,171	8,174	8,178	8,181
Civilian labor force	5,200	5,259	5,258	5,276	5,181	5,215	5,263	5,264	5,330
Employed	4,748	4,937	4,883	4,849	4,891	4,900	4,945	4,937	4,983
Unemployed	452	322	375	427	290	315	318	327	347
Unemployment rate	8.7	6.1	7.1	8.1	5.6	6.0	6.0	6.2	6.5

See footnotes at end of table.

Table A-13. Employment status of the civilian population for eleven large States—Continued

(Numbers in thousands)

State and employment status	Not seasonally adjusted[1]			Seasonally adjusted[2]					
	Jan. 1987	Dec. 1987	Jan. 1988	Jan. 1987	Sept. 1987	Oct. 1987	Nov. 1987	Dec. 1987	Jan. 1988
Pennsylvania									
Civilian noninstitutional population	9,268	9,307	9,309	9,268	9,299	9,303	9,305	9,307	9,309
Civilian labor force	5,494	5,752	5,728	5,593	5,683	5,734	5,709	5,780	5,827
Employed	5,135	5,459	5,372	5,259	5,365	5,403	5,394	5,457	5,497
Unemployed	359	293	356	334	318	331	315	323	330
Unemployment rate	6.5	5.1	6.2	6.0	5.6	5.8	5.5	5.6	5.7
Texas									
Civilian noninstitutional population	11,995	12,048	12,050	11,995	12,036	12,041	12,044	12,048	12,050
Civilian labor force	8,127	8,269	8,162	8,219	8,254	8,249	8,351	8,286	8,255
Employed	7,328	7,708	7,479	7,444	7,559	7,592	7,659	7,646	7,595
Unemployed	799	561	683	775	695	657	692	640	660
Unemployment rate	9.8	6.8	8.4	9.4	8.4	8.0	8.3	7.7	8.0

---

[1] These are the official Bureau of Labor Statistics' estimates used in the administration of Federal fund allocation programs.

[2] The population figures are not adjusted for seasonal variation; therefore, identical numbers appear in the unadjusted and the seasonally adjusted columns.

Table B-1. Employees on nonagricultural payrolls by industry

(In thousands)

Industry	Not seasonally adjusted				Seasonally adjusted					
	Jan. 1987	Nov. 1987	Dec. 1987 p	Jan. 1988 p	Jan. 1987	Sept. 1987	Oct. 1987	Nov. 1987	Dec. 1987 p	Jan. 1988 p
Total	99,511	104,134	104,357	102,265	100,919	102,434	102,983	103,285	103,596	103,703
Total private	82,584	86,577	86,816	85,073	83,983	85,386	85,795	86,072	86,322	86,496
Goods-producing	24,139	25,374	25,193	24,652	24,708	24,917	25,064	25,169	25,258	25,219
Mining	716	765	764	743	718	759	764	759	759	745
Oil and gas extraction	412.0	444.1	446.7	434.0	405	439	443	439	437	426
Construction	4,620	5,206	5,045	4,656	5,034	4,989	5,053	5,074	5,122	5,072
General building contractors	1,220.2	1,313.0	1,286.4	1,210.6	1,311	1,260	1,279	1,280	1,292	1,299
Manufacturing	18,803	19,403	19,384	19,253	18,956	19,169	19,247	19,336	19,377	19,402
Production workers	12,753	13,264	13,244	13,121	12,884	13,072	13,129	13,197	13,237	13,249
Durable goods	11,087	11,401	11,412	11,347	11,157	11,268	11,319	11,367	11,401	11,413
Production workers	7,318	7,601	7,606	7,544	7,370	7,494	7,530	7,568	7,596	7,594
Lumber and wood products	704.8	749.7	742.2	728.3	731	740	741	750	734	755
Furniture and fixtures	500.7	532.0	534.4	534.1	500	520	524	526	529	533
Stone, clay, and glass products	564.8	591.9	583.4	563.5	586	581	583	588	590	584
Primary metal industries	726.6	765.4	768.5	766.7	726	764	768	771	772	766
Blast furnaces and basic steel products	254.4	282.5	283.7	283.4	254	283	286	287	285	283
Fabricated metal products	1,415.0	1,453.2	1,455.0	1,468.3	1,422	1,429	1,438	1,446	1,451	1,454
Machinery, except electrical	2,006.3	2,071.8	2,088.8	2,090.0	2,007	2,053	2,064	2,074	2,083	2,098
Electrical and electronic equipment	2,108.9	2,122.7	2,132.5	2,133.6	2,111	2,096	2,111	2,118	2,128	2,136
Transportation equipment	2,010.3	2,027.6	2,031.8	2,005.9	2,016	2,018	2,019	2,016	2,016	2,008
Motor vehicles and equipment	843.7	841.7	844.1	816.9	851	837	838	835	831	823
Instruments and related products	695.6	701.3	701.1	698.7	697	695	697	701	700	700
Miscellaneous manufacturing	353.9	384.8	374.6	369.6	363	372	374	377	376	379
Nondurable goods	7,716	8,002	7,972	7,906	7,799	7,901	7,928	7,969	7,976	7,989
Production workers	5,435	5,663	5,638	5,577	5,514	5,578	5,599	5,629	5,641	5,655
Food and kindred products	1,576.4	1,659.4	1,635.6	1,605.9	1,628	1,631	1,635	1,645	1,644	1,659
Tobacco manufactures	59.7	57.7	58.1	57.4	58	55	55	56	56	55
Textile mill products	715.4	741.1	738.5	731.9	718	735	736	738	738	735
Apparel and other textile products	1,096.3	1,133.9	1,120.3	1,104.8	1,106	1,117	1,123	1,128	1,121	1,116
Paper and allied products	674.0	681.1	681.3	678.8	678	681	678	680	681	682
Printing and publishing	1,477.0	1,528.1	1,532.6	1,529.0	1,479	1,509	1,514	1,522	1,525	1,531
Chemicals and allied products	1,011.5	1,039.3	1,043.9	1,042.6	1,018	1,031	1,035	1,041	1,047	1,049
Petroleum and coal products	160.6	165.9	164.2	162.0	164	166	167	167	167	165
Rubber and miscellaneous plastics products	799.0	840.1	844.0	842.6	803	824	833	840	845	846
Leather and leather products	145.5	155.3	153.3	151.4	147	152	152	152	152	153
Service-producing	75,372	78,760	79,164	77,613	76,211	77,517	77,919	78,116	78,338	78,484
Transportation and public utilities	5,245	5,489	5,505	5,417	5,304	5,416	5,436	5,459	5,468	5,476
Transportation	3,040	3,250	3,266	3,180	3,089	3,183	3,198	3,218	3,227	3,228
Communication and public utilities	2,205	2,239	2,239	2,237	2,215	2,233	2,238	2,241	2,241	2,248
Wholesale trade	5,700	5,868	5,880	5,851	5,741	5,815	5,831	5,851	5,873	5,892
Durable goods	3,368	3,459	3,475	3,470	3,386	3,431	3,444	3,456	3,475	3,487
Nondurable goods	2,332	2,409	2,405	2,381	2,355	2,384	2,387	2,395	2,398	2,405
Retail trade	17,810	18,720	19,060	18,308	18,080	18,316	18,408	18,443	18,433	18,587
General merchandise stores	2,409.4	2,610.8	2,727.4	2,511.5	2,358	2,415	2,439	2,454	2,427	2,457
Food stores	2,917.8	3,017.6	3,056.5	3,007.0	2,929	2,958	2,969	2,982	2,994	3,019
Automotive dealers and service stations	1,958.1	1,998.9	2,000.6	2,007.0	1,978	1,988	2,000	2,003	2,011	2,027
Eating and drinking places	5,665.4	5,992.5	6,008.4	5,795.8	5,966	6,018	6,032	6,047	6,063	6,082
Finance, insurance, and real estate	6,422	6,633	6,653	6,613	6,480	6,629	6,650	6,657	6,667	6,671
Finance	3,222	3,291	3,300	3,295	3,235	3,292	3,296	3,301	3,303	3,308
Insurance	2,007	2,067	2,080	2,079	2,012	2,054	2,068	2,069	2,082	2,083
Real estate	1,193	1,275	1,273	1,239	1,233	1,283	1,286	1,287	1,282	1,280
Services	23,268	24,493	24,525	24,232	23,670	24,293	24,406	24,493	24,623	24,651
Business services	4,879.8	5,236.2	5,247.7	5,146.8	4,950	5,132	5,194	5,195	5,222	5,220
Health services	6,705.7	7,016.0	7,050.7	7,088.1	6,721	6,963	6,987	7,023	7,065	7,102
Government	16,927	17,557	17,541	17,192	16,936	17,048	17,188	17,213	17,274	17,207
Federal	2,888	2,956	2,970	2,957	2,912	2,962	2,965	2,977	2,979	2,981
State	3,898	4,097	4,074	3,939	3,929	3,957	3,973	3,978	3,994	3,971
Local	10,141	10,504	10,497	10,296	10,095	10,129	10,250	10,258	10,301	10,255

p = preliminary.

Table B-2. Average weekly hours of production or nonsupervisory workers[1] on private nonagricultural payrolls by industry

Industry	Not seasonally adjusted				Seasonally adjusted					
	Jan. 1987	Nov. 1987	Dec. 1987 p	Jan. 1988 p	Jan. 1987	Sept. 1987	Oct. 1987	Nov. 1987	Dec. 1987 p	Jan. 1988 p
Total private	34.4	34.8	34.9	34.4	34.7	34.6	34.9	34.9	34.7	34.7
Mining	42.5	42.3	43.0	42.2	(2)	(2)	(2)	(2)	(2)	(2)
Construction	37.2	37.1	37.6	36.0	(2)	(2)	(2)	(2)	(2)	(2)
Manufacturing	40.8	41.4	41.8	41.0	40.9	40.6	41.3	41.2	41.0	41.1
Overtime hours	3.5	4.1	4.2	3.8	3.6	3.6	4.0	3.9	3.9	3.9
Durable goods	41.5	42.0	42.5	41.5	41.6	41.0	41.9	41.9	41.6	41.6
Overtime hours	3.6	4.2	4.4	3.9	3.7	3.7	4.1	4.0	4.0	4.0
Lumber and wood products	40.1	40.4	40.5	39.1	40.8	39.4	40.4	40.8	40.5	39.7
Furniture and fixtures	39.8	40.4	40.9	39.0	40.2	39.3	40.0	40.0	39.7	39.4
Stone, clay, and glass products	41.4	42.4	42.3	41.1	42.5	41.9	42.6	42.5	42.6	42.2
Primary metal industries	42.6	43.8	44.1	43.5	42.6	43.4	43.7	43.7	43.5	43.5
Blast furnaces and basic steel products	42.5	43.9	44.4	44.0	42.7	43.2	44.3	44.0	44.1	44.2
Fabricated metal products	41.5	42.3	42.8	41.7	41.6	40.8	42.0	42.1	41.8	41.8
Machinery, except electrical	42.0	42.9	43.6	42.8	42.0	41.6	42.6	42.7	42.5	42.8
Electrical and electronic equipment	41.1	41.4	41.9	41.3	41.0	40.4	41.1	41.0	40.8	41.2
Transportation equipment	42.5	42.6	42.9	42.2	42.3	41.3	42.5	42.4	41.6	42.0
Motor vehicles and equipment	43.1	43.0	42.9	42.2	42.9	41.3	43.0	43.1	41.4	41.9
Instruments and related products	41.2	42.0	42.6	41.6	41.2	41.1	42.1	41.7	41.5	41.6
Miscellaneous manufacturing	39.5	39.6	39.8	38.9	(2)	(2)	(2)	(2)	(2)	(2)
Nondurable goods	39.9	40.6	41.0	40.2	40.1	40.1	40.5	40.4	40.3	40.3
Overtime hours	3.3	3.8	3.9	3.6	3.5	3.6	3.8	3.8	3.7	3.8
Food and kindred products	39.8	40.8	41.1	40.3	40.0	40.2	40.5	40.6	40.6	40.5
Tobacco manufactures	37.1	41.0	40.4	38.2	(2)	(2)	(2)	(2)	(2)	(2)
Textile mill products	41.4	42.2	42.3	41.1	41.6	41.3	41.9	41.8	41.7	41.3
Apparel and other textile products	36.8	37.4	37.6	36.9	37.0	36.3	37.4	37.1	37.2	37.1
Paper and allied products	43.4	43.7	44.1	43.6	43.4	43.8	43.7	43.5	43.2	43.6
Printing and publishing	37.6	38.3	38.7	37.6	37.9	38.2	38.0	38.0	37.9	37.9
Chemicals and allied products	42.2	42.8	43.3	42.7	42.2	42.8	42.7	42.7	42.8	42.7
Petroleum and coal products	44.3	43.8	44.5	44.2	44.6	43.2	43.5	43.6	44.5	44.5
Rubber and miscellaneous plastics products	41.6	42.1	42.4	42.0	(2)	(2)	(2)	(2)	(2)	(2)
Leather and leather products	37.3	38.3	38.5	38.4	(2)	(2)	(2)	(2)	(2)	(2)
Transportation and public utilities	38.5	39.2	39.2	38.8	39.0	39.1	39.3	39.1	39.0	39.3
Wholesale trade	38.1	38.3	38.3	38.1	38.3	38.0	38.6	38.3	38.1	38.3
Retail trade	28.3	29.0	29.3	28.3	29.0	29.6	29.3	29.2	28.8	28.9
Finance, insurance, and real estate	36.3	36.3	36.1	36.3	(2)	(2)	(2)	(2)	(2)	(2)
Services	32.2	32.5	32.5	32.5	32.4	32.5	32.5	32.6	32.5	32.7

---

[1] Data relate to production workers in mining and manufacturing; to construction workers in construction; and to nonsupervisory workers in transportation and public utilities; wholesale and retail trade; finance, insurance, and real estate; and services. These groups account for approximately four-fifths of the total employees on private nonagricultural payrolls.

[2] This series is not published seasonally adjusted since the seasonal component is small relative to the trend-cycle and/or irregular components and consequently cannot be separated with sufficient precision.

p = preliminary.

Table B-3. Average hourly and weekly earnings of production or nonsupervisory workers[1] on private nonagricultural payrolls by industry

Industry	Average hourly earnings				Average weekly earnings			
	Jan. 1987	Nov. 1987	Dec. 1987 p	Jan. 1988 p	Jan. 1987	Nov. 1987	Dec. 1987 p	Jan. 1988 p
Total private	$8.90	$9.14	$9.12	$9.18	$306.16	$318.07	$318.29	$315.79
Seasonally adjusted	8.86	9.12	9.10	9.14	307.44	318.29	315.77	317.16
Mining	12.66	12.47	12.49	12.61	538.05	527.48	537.07	532.14
Construction	12.58	12.80	12.78	12.90	467.98	474.88	480.53	464.40
Manufacturing	9.84	10.01	10.08	10.09	401.47	414.41	421.34	413.69
Durable goods	10.38	10.57	10.63	10.63	430.77	443.94	451.78	441.15
Lumber and wood products	8.27	8.49	8.45	8.55	331.63	343.00	342.23	334.31
Furniture and fixtures	7.61	7.73	7.79	7.79	302.88	312.29	318.61	303.81
Stone, clay, and glass products	10.17	10.34	10.34	10.34	421.04	438.42	437.38	424.97
Primary metal industries	11.76	12.08	12.16	12.14	500.98	529.10	536.26	528.09
Blast furnaces and basic steel products	13.55	13.97	14.07	13.98	575.88	613.28	626.71	615.12
Fabricated metal products	9.98	10.15	10.23	10.18	414.17	429.35	437.84	426.51
Machinery, except electrical	10.64	10.89	10.97	10.95	446.88	467.18	478.29	468.66
Electrical and electronic equipment	9.84	10.00	10.07	10.05	404.42	414.00	421.93	413.07
Transportation equipment	12.93	13.18	13.26	13.22	549.53	561.47	568.85	557.88
Motor vehicles and equipment	13.58	13.82	13.92	13.96	585.30	594.26	597.17	589.11
Instruments and related products	9.64	9.87	9.89	9.99	397.17	414.54	421.31	415.58
Miscellaneous manufacturing	7.69	7.81	7.87	7.95	303.76	309.28	313.23	309.26
Nondurable goods	9.09	9.24	9.31	9.33	362.69	375.14	381.71	375.07
Food and kindred products	8.90	8.96	9.05	9.10	354.22	365.57	371.96	366.73
Tobacco manufactures	12.97	13.44	13.68	14.12	481.19	551.04	555.41	539.38
Textile mill products	7.10	7.31	7.32	7.37	293.94	308.48	309.64	302.91
Apparel and other textile products	5.94	6.00	6.02	6.04	218.59	224.40	226.35	222.88
Paper and allied products	11.26	11.50	11.56	11.53	488.68	502.55	509.80	502.71
Printing and publishing	10.14	10.39	10.44	10.38	381.26	397.94	404.03	390.29
Chemicals and allied products	12.18	12.56	12.61	12.62	514.00	537.57	546.01	538.87
Petroleum and coal products	14.57	14.75	14.70	14.73	643.45	646.05	654.15	651.95
Rubber and miscellaneous plastics products	8.83	8.93	9.01	9.00	367.33	375.95	382.02	378.00
Leather and leather products	6.04	6.11	6.10	6.12	225.29	234.01	234.85	235.01
Transportation and public utilities	11.89	12.17	12.12	12.10	457.77	477.06	475.10	469.48
Wholesale trade	9.49	9.74	9.74	9.81	361.57	373.04	373.04	373.76
Retail trade	6.09	6.19	6.17	6.23	172.35	179.51	180.78	176.31
Finance, insurance, and real estate	8.60	8.94	8.85	8.93	311.18	324.52	319.49	324.16
Services	8.37	8.71	8.72	8.80	269.51	283.08	283.40	286.00

[1] See footnote 1, table B-2.

p = preliminary.

Table B-4. Hourly Earnings Index for production or nonsupervisory workers[1] on private nonagricultural payrolls by industry

(1977 = 100)

Industry	Not seasonally adjusted					Seasonally adjusted						
	Jan. 1987	Nov. 1987	Dec. 1987p	Jan. 1988p	Percent change from: Jan. 1987- Jan. 1988	Jan. 1987	Sept. 1987	Oct. 1987	Nov. 1987	Dec. 1987p	Jan. 1988p	Percent change from: Dec. 1987- Jan. 1988
Total private nonfarm:												
Current dollars	171.7	176.0	176.0	176.7	2.9	171.2	174.6	174.9	175.8	175.4	176.3	0.5
Constant (1977) dollars	95.0	93.8	93.9	N.A.	(2)	94.7	93.8	93.7	93.8	93.6	N.A.	(3)
Mining	182.6	184.1	183.5	183.0	.2	(4)	(4)	(4)	(4)	(4)	(4)	(4)
Construction	152.8	156.1	155.5	156.5	2.4	152.8	154.0	154.7	156.6	154.5	156.7	1.4
Manufacturing	174.0	176.5	177.3	177.9	2.3	173.4	176.7	176.3	176.6	177.0	177.3	.2
Transportation and public utilities	174.0	178.4	177.9	176.9	1.7	173.6	174.6	174.9	177.1	176.7	176.5	-.1
Wholesale trade	175.0	179.6	179.6	180.7	3.2	(4)	(4)	(4)	(4)	(4)	(4)	(4)
Retail trade	159.0	162.3	161.8	162.6	2.2	158.9	162.7	162.2	162.3	161.9	162.6	.4
Finance, insurance, and real estate	184.7	192.1	190.7	192.1	4.0	(4)	(4)	(4)	(4)	(4)	(4)	(4)
Services	178.4	185.8	185.9	187.4	5.0	177.5	182.3	183.9	185.2	184.8	186.4	.9

[1] See footnote 1, table B-2.

[2] Change is -1.8 percent from December 1986 to December 1987, the latest month available.

[3] Change is -.3 percent from November 1987 to December 1987, the latest month available.

[4] These series are not seasonally adjusted since the seasonal component is small relative to the trend-cycle and/or irregular components and consequently cannot be separated with sufficient precision.

p = preliminary.

N.A. = not available.

Table B-5. Indexes of aggregate weekly hours of production or nonsupervisory workers[1] on private nonagricultural payrolls by industry

(1977 = 100)

Industry	Not seasonally adjusted				Seasonally adjusted					
	Jan. 1987	Nov. 1987	Dec. 1987 p	Jan. 1988 p	Jan. 1987	Sept. 1987	Oct. 1987	Nov. 1987	Dec. 1987 p	Jan. 1988 p
Total	115.3	122.8	123.5	118.7	118.7	120.4	121.9	122.2	121.9	122.2
Goods-producing	95.3	102.4	102.5	97.2	98.8	97.7	101.3	101.4	101.7	100.5
Mining	79.4	87.6	88.4	83.2	78.9	84.9	87.7	86.4	86.3	82.7
Construction	119.8	137.2	133.6	115.8	136.2	124.9	136.8	136.1	138.5	131.2
Manufacturing	91.3	96.4	97.2	94.3	92.5	93.1	95.0	95.4	95.3	95.4
Durable goods	89.1	93.8	94.8	92.0	90.0	90.1	92.6	93.0	92.7	92.8
Lumber and wood products	96.0	103.1	102.2	96.9	101.5	99.2	101.7	104.2	104.1	102.0
Furniture and fixtures	107.1	115.6	118.0	112.0	107.9	109.7	112.7	113.3	113.2	112.6
Stone, clay, and glass products	81.4	88.6	86.9	81.1	87.3	85.9	87.7	88.1	89.1	87.1
Primary metal industries	60.6	66.9	67.7	66.6	60.4	65.9	66.8	67.3	67.1	66.5
Blast furnaces and basic steel products	45.7	54.1	55.0	54.5	46.1	55.2	54.9	55.0	54.9	54.8
Fabricated metal products	88.3	93.1	94.4	91.4	89.1	88.2	91.3	92.2	92.0	92.2
Machinery, except electrical	84.4	90.2	92.7	91.6	84.2	86.7	89.3	90.1	90.1	91.4
Electrical and electronic equipment	101.2	103.7	105.6	104.0	100.8	99.3	102.0	102.0	102.4	103.5
Transportation equipment	98.1	98.4	99.6	95.7	97.5	95.2	97.8	97.3	95.1	95.1
Motor vehicles and equipment	87.2	87.5	87.7	82.4	87.5	83.3	86.9	86.7	82.9	82.3
Instruments and related products	101.5	105.6	107.0	104.6	101.8	102.1	105.1	104.6	104.1	104.9
Miscellaneous manufacturing	77.8	86.1	83.3	80.0	81.0	80.7	82.7	82.5	82.3	83.4
Nondurable goods	94.5	100.2	100.6	97.6	96.3	97.4	98.7	99.0	99.1	99.3
Food and kindred products	94.3	103.1	102.1	97.5	98.8	99.1	100.3	101.4	101.4	102.4
Tobacco manufactures	78.9	81.9	82.2	75.0	76.3	72.4	73.8	75.4	76.7	73.2
Textile mill products	80.3	84.9	84.9	81.5	81.2	82.4	83.7	83.8	83.4	82.1
Apparel and other textile products	84.2	88.9	88.3	85.3	85.8	84.8	87.8	87.6	87.4	86.6
Paper and allied products	100.0	101.8	102.9	101.6	100.6	101.9	101.3	101.0	100.7	102.1
Printing and publishing	128.1	134.4	136.7	132.2	129.5	132.6	132.3	133.0	132.9	133.6
Chemicals and allied products	92.5	96.7	98.8	97.2	93.2	96.4	96.3	97.0	97.9	98.0
Petroleum and coal products	80.9	84.8	85.3	83.8	84.3	83.2	84.5	83.9	87.3	86.5
Rubber and miscellaneous plastics products	112.6	120.1	121.8	120.7	112.9	115.5	118.4	119.3	119.5	120.8
Leather and leather products	56.0	61.8	61.1	59.9	57.4	60.0	61.1	60.2	59.7	61.3
Service-producing	126.4	134.1	135.2	130.7	129.8	132.9	133.3	135.6	133.1	134.1
Transportation and public utilities	104.5	111.8	111.7	108.4	107.0	109.9	110.9	110.7	110.3	111.1
Wholesale trade	115.4	119.4	119.7	118.0	117.1	117.3	118.8	119.0	118.7	119.8
Retail trade	114.2	123.0	126.7	116.8	118.9	122.5	121.9	121.6	119.9	121.2
Finance, insurance, and real estate	138.9	142.1	141.8	140.9	140.4	141.4	142.2	142.9	141.3	142.5
Services	145.1	154.4	154.1	152.0	148.6	152.9	153.5	154.6	155.1	156.0

[1] See footnote 1, table B-2.

p = preliminary.

Table B-6. Indexes of diffusion: Percent of industries in which employment[1] increased

Time span	Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Over 1-month span	1986	53.2	48.1	48.1	53.5	52.4	46.8	52.4	56.2	55.1	53.2	59.7	59.7
	1987	53.5	56.8	58.6	58.4	58.6	55.7	68.6	54.6	65.4	65.4	71.9	p62.2
	1988	p59.2											
Over 3-month span	1986	49.7	44.9	45.7	48.4	47.6	45.4	48.4	55.1	55.9	58.1	58.6	60.3
	1987	58.6	59.5	61.1	61.6	61.4	67.3	66.2	75.1	69.7	77.8	p74.6	p68.4
	1988												
Over 6-month span	1986	47.6	47.6	43.0	43.2	45.4	48.4	47.3	53.0	59.2	58.9	57.8	58.9
	1987	61.9	62.7	58.9	67.3	67.6	71.1	76.2	78.6	p79.5	p73.2		
	1988												
Over 12-month span	1986	43.2	44.1	46.2	45.7	47.8	49.5	49.5	51.6	54.9	52.2	55.1	56.5
	1987	62.2	63.5	67.3	68.9	73.8	p71.9	p76.5					
	1988												

[1] Number of employees, seasonally adjusted for 1, 3, and 6 month spans, on payrolls of 185 private nonagricultural industries. Data for the 12-month span are unadjusted.

p = preliminary.

NOTE: Figures are the percent of industries with employment rising. (Half of the unchanged components are counted as rising.) Data are centered within the spans.

Senator **Sarbanes**. Thank you very much, Commissioner. I will be very brief this morning. In fact, I have another hearing which I have to chair shortly.

The Commerce Department earlier this week issued its release on the latest development in the Composite Index of Leading Indicators, showing that they had decreased 0.2 percent in December, according to preliminary estimates. The index had decreased in November, and also in October. So that makes 3 straight months of a decrease in the Index of Leading Indicators.

Historically, has there been any correlation between a decline in the leading indicators and a rise in the unemployment figure?

Mrs. **Norwood**. There has been, but it is spotty. It depends really on all of the other circumstances that have occurred. As you know, the major contributors to the decline in the leading indicators were building permits decline and the stock market decline.

The leading indicators also do bounce around a bit and are often revised. We have a minus 0.1 for October, a minus 1.2 in November, and a minus 0.2 in December. The October number is really quite borderline.

So, though it is not suggesting that the economy is going fast ahead, it is also not suggesting that it is plunging downward.

Senator **Sarbanes**. When there is a correlation, by how much of a time period do the unemployment figures lag before they reflect the decline in the leading indicators?

Mrs. **Norwood**. There is a lag. If you like, we could go back in time and take a look at that. I don't have information on that here. There are times when the unemployment rate has not followed the leading indicators, but there are many times when it has, with some lag. And that lag could be many months.

Senator **Sarbanes**. Could be what?

Mrs. **Norwood**. Many months.

Senator **Sarbanes**. Now, the service industries and retail trades accounted for almost all of the growth in payroll employment in your report this morning. Is that correct?

Mrs. **Norwood**. Yes. That is right.

Senator **Sarbanes**. Is that a seasonal development that we need to discount, or does it reflect some underlying strong job growth in retailing?

Mrs. **Norwood**. All of the data for the month of January are, of course, affected by strong seasonal movements. The data for retail trade, I believe, are reasonably in line with what has happened in the previous period. Buildup over the Christmas season this past year was about in line with that which occurred from 1985 onward, but a little bit less than what occurred during the early 1980's. So there may be some exaggeration. However, I think that part of the explanation may be that it is getting increasingly difficult for many of our retailers to attract young people because there are fewer of them. It may also be hard to attract people at relatively low wages typically paid by the industry.

Senator **Sarbanes**. Let me go back to the previous subject because I am curious.

How many months of a decline in the leading indicators would have to occur before you expressed surprise that that decline was not showing up in the unemployment figures?

Mrs. NORWOOD. I think I would not look only at the leading indicators. My experience with the leading indicators is that they are often revised and the numbers change fairly quickly.

What I would be concerned about is the elements that make up the leading indicators. And in looking at those, I find that, for example, the index in this month, in December, went down 0.2. There was a negative for the average workweek. I really think the average workweek is at extraordinarily high levels, and whether it goes down a tick or up a tick is not very important, so I would tend to discount that.

The initial claims figures have changed. The unemployment insurance system is reporting now an increase in initial claims for unemployment insurance, and that is something that clearly bears watching. But we have seen that turn around, too.

New orders are up. The stock market we know about. The one area that is really looking quite poor is housing. Building permits are way down. That has had a big effect on the leading indicators, not just this month, but also in October. And I would watch that. That seems to have shown up, I think, in the construction numbers.

Senator SARBANES. And then it is later reflected in all the other items that are involved in housing, is it not?

Mrs. NORWOOD. Yes.

Senator SARBANES. In other words, your permits for new housing are down. That does not reflect the orders for everything that goes into housing, which would follow on.

Mrs. NORWOOD. That is right. Furniture, appliances, things of that sort would be affected as well.

Now, it is not clear why the housing market has been contracting. It may be in part some of the changes in the tax legislation which make the purchases of some houses for investment purposes somewhat less remunerative. Over the year, employment in construction has changed very little.

Now, in other parts of the economy, we are beginning to see some improvement in export-related industries and export-related activities.

Senator SARBANES. Thank you very much.

Congressman Wylie.

Representative WYLIE. Thank you, Mr. Chairman.

This really is pretty good news for January, is it not, which is usually a fairly slow month employmentwise, after Christmas, et cetera? Is that a fair statement?

Mrs. NORWOOD. Some of the data are certainly quite good; yes.

Representative WYLIE. I need to get a little provincial here and have to get this question in. I see from table A-13 in your Employment Situation press release that the civilian labor force in Ohio has increased by 150,000 in 4 months, just since September, on a seasonally adjusted basis. Our unemployment rate, if my figures are correct, would be below 5 percent if that inflow had not occurred.

My question is: Do you have evidence that there is migration back to the upper Midwest from Texas, Louisiana, and other States experiencing economic difficulties? Why has our labor force gained by 150,000 during that 4-month period; do you know?

Mrs. **Norwood**. There has clearly been an increase in employment in the region that Ohio is located in and the region surrounding it, clearly not so much as in the West, where employment and the labor force have increased a great deal.

Representative **Wylie**. But our unemployment figure or rate would be better if we hadn't had 150,000 people, apparently an increase in persons seeking employment during that period, obviously.

Mrs. **Norwood**. That is true, of course. The unemployment rate is dependent on the number of people in the labor force who are looking for jobs. One of the reasons that the labor force increases is partly just because the people are there, and as population increases the labor force increases.

But another reason is that as people begin to feel that there may be jobs available, they go out looking for them. So that is a good thing.

Representative **Wylie**. Our population in Ohio is actually declining, except in the 15th Congressional District which I represent in the central Ohio area.

Senator **Sarbanes**. Which shows that quality congressional representation can attract population.

Representative **Wylie**. It's OK for you to say that, Mr. Chairman.

I would like to get back to the statement you made about the construction industry. Being on the House Banking Committee, we have jurisdiction over housing legislation. But your figures do show some weaknesses in construction employment, perhaps in response to higher mortgage rates last year. At least that is what the National Association of Home Builders attributed it to in Dallas last week when I was there.

Now, this week, we see that there has been a decline in the prime rate and a slight decline in mortgage rates. If that is sustained or continued, might not we expect some future gains in construction employment? What is the relationship between mortgage interest rates and weakness or strength in the construction industry?

Mrs. **Norwood**. If interest rates were to stay down, clearly that would have an effect of increasing activity in construction. The real question is, first, whether they will go down sufficiently; and then, second, whether they will stay down.

Most forecasters are expecting an easing of interest rates through the end of next year and then a beginning of an increase. So it is a question of what people see down the line. I think a lot of that will depend, by the way, upon our success in export markets, because to the extent there is greater pressure on the dollar, there will be more of a need to increase interest rates to attract foreign investment.

We seem to be doing fairly well on that score right now, so it is a question of whether that continues. So it is not just, I think, a question of the easing at the moment.

Representative **Wylie**. You spoke about foreign investment. The U.S. civilian unemployment rate is now 5.8 percent. How does this compare with European nations such as France, Germany, the United Kingdom, and Italy?

Mrs. **Norwood**. It compares quite favorably with most of the other countries. We are lower than most of the countries that we develop comparisons for, except for Sweden and Japan. For example, we have a lower unemployment rate now than Canada, France, Germany, the United Kingdom, and probably lower than Italy, though there are some problems in calculating the Italian unemployment rate.

Representative **Wylie**. Is the gain in export trade related to the gain in manufacturing employment?

Mrs. **Norwood**. Yes. Yes, clearly.

I think the increase over the last 6 months in employment in manufacturing is clearly related to the pickup in our trade.

Representative **Wylie**. Thank you, Mr. Chairman.

Senator **Sarbanes**. Thank you very much, Congressman Wylie.

Do you have those national comparisons for unemployment? Do they embrace any of the Pacific Rim countries, other than Japan?

Mrs. **Norwood**. No, they do not.

What we do is get data to adjust their unemployment rates to our concepts, and it is extraordinarily difficult to get that information.

Senator **Sarbanes**. So for Korea or Taiwan, these countries that are running very large surpluses, you don't have any figures on their unemployment rates?

Mrs. **Norwood**. No, we do not.

Obviously, they publish them, but they are not generally comparable to ours in concept.

Senator **Sarbanes**. As published, they are extremely low, is that correct, for those countries?

Mrs. **Norwood**. I believe so.

Senator **Sarbanes**. Well, thank you very much, Commissioner.

Representative **Wylie**. I have just one final question. I know you want to go.

What is your prediction as to continued economic growth in 1988?

Mrs. **Norwood**. Like everyone else, I hope it will be very good.

Representative **Wylie**. You hope it will be very good.

All right. Thank you very much.

Senator **Sarbanes**. The committee is adjourned.

Thank you, Commissioner.

[Whereupon, at 9:58 a.m., the committee adjourned, subject to the call of the Chair.]

EMPLOYMENT-UNEMPLOYMENT

FRIDAY, MARCH 4, 1988

Congress of the United States,
Joint Economic Committee,
Washington, DC.

The committee met, pursuant to notice, at 9:30 a.m., in room SD-628, Dirksen Senate Office Building, Hon. Paul S. Sarbanes (chairman of the committee) presiding.

Present: Senators Sarbanes, Proxmire, Roth, and D'Amato; and Representative Solarz.

Also present: Judith Davison, executive director; and William Buechner, Jim Klumpner, Lee Price, and Chris Frenze, professional staff members.

OPENING STATEMENT OF SENATOR SARBANES, CHAIRMAN

Senator **Sarbanes**. The committee will come to order.

I apologize for being detained. I have just renewed my conviction that we need to improve the Nation's physical infrastructure, particularly the transportation network.

I am very pleased once again to welcome Commissioner Janet Norwood from the Bureau of Labor Statistics before the committee this morning to discuss the employment and unemployment figures for February.

Before you start, Commissioner Norwood, I just want to look at the economy from the perspective of two other data series that are issued periodically by the Bureau of Labor Statistics—real earnings and productivity. Perhaps later in the hearing you might have a chance to take a look at those.

As I understand the latest data series, last year, while the economy created almost 3 million new jobs and the unemployment rate declined, there was apparently a downward trend in the average worker's earnings after adjustment for inflation. Earnings appear to have been a full percentage point lower in January of this year than they were in January of the previous year, and 2 percent lower than back in 1980.

The productivity figures for the economy were also a matter of concern. During the fourth quarter, nonfarm productivity rose by only 0.3 of a percent and for the year as a whole by 0.9 of a percent. The only good news has been in the manufacturing sector, but even there improvement in 1987 was still only half of the gain registered in 1983 and 1984.

Looking at these two series it seems that what kept the overall inflation rate from accelerating in the 1980's was not an increase in productivity but rather the low-wage gains received by workers, at least if you put them together. Perhaps later after we've completed review of the unemployment figures we might get into this subject.

That concludes my statement. I'm now prepared to turn to the Commissioner but I think some of my colleagues may have statements. Senator Roth.

OPENING STATEMENT OF SENATOR ROTH

Senator ROTH. Thank you, Mr. Chairman.

Welcome, Mrs. Norwood, Mr. Dalton, and Mr. Bregger. We look forward to your testimony and indeed, as I understand it, today's employment record is going to be good news for the American worker.

As I understand it, the unemployment has dropped 0.1 of a point to a level of 5.7 percent, which I think is the lowest unemployment since 1979.

The closely watched payroll survey posts a huge increase of over a half million new jobs. My understanding is that this 1-month increase is one of the largest on record in the history of our country.

Now, according to the household survey, 280,000 new jobs were created in February which pushes the total household employment to a level of 114.4 million, a new high. More Americans are employed now than ever before. The creation of new opportunities for all Americans has pushed the employment-population ratio to a record level of 62.2 percent. It's particularly good news that the rise in the employment-population ratio is also reflected among adult women workers.

In the course of this expansion over 15 million new jobs have been created and despite the mythology, most of these jobs have been in middle- and high-paying occupations. Moreover, not only has the quality of these new jobs been good but we have created about seven times the number of jobs as all the other major industrial nations combined.

The ability of the United States to escape from malaise and stagflation has also led to continued gains in median family income. Over the course of the expansion real income has risen by 10.7 percent. So that means a real sustained increase in American living standards.

For the 6th year of the longest peacetime upswing in U.S. history, while we've made much progress, we cannot be complacent. We must avoid mistakes of the past. We must never forget that the key test of economic policy is the ability to create jobs and to increase income.

So I'm pleased to have you here today, Mrs. Norwood, and look forward to your testimony.

Thank you, Mr. Chairman.

Senator SARBANES. Thank you, Senator Roth.

Does anyone else have an opening statement? Senator D'Amato.

Senator D'AMATO. Mr. Chairman, thank you. In the interest of time, I have another committee meeting, I'd like to submit my written opening statement for the record as if read in its entirety and I certainly welcome Mrs. Norwood to the committee. It's always a privilege to hear her and I'd like to get some of those good words of wisdom on the record and listen to them for the few minutes that I'm permitted to be here.

Senator SARBANES. Very good. Your written opening statement will be included in full in the record.

[The written opening statement follows:]

WRITTEN OPENING STATEMENT OF SENATOR D'AMATO

MR. CHAIRMAN, I WOULD LIKE TO WELCOME TO THE JOINT ECONOMIC COMMITTEE THIS MORNING DR. JANET NORWOOD. COMMISSIONER NORWOOD, I AM MOST INTERESTED IN YOUR OBSERVATIONS ON FEBRUARY'S EMPLOYMENT FIGURES.

AS WE ALL KNOW, LAST MONTH YOU REPORTED TO THIS COMMITTEE EMPLOYMENT FIGURES FOR JANUARY THAT WERE AT THEIR LOWEST SINCE THE END OF 1979. YOU REPORTED THAT THE TOTAL CIVILIAN EMPLOYMENT ROSE A HEALTHY 385,000 TO A TOTAL OF 114.1 MILLION IN JANUARY, A NEW RECORD HIGH. THE UNEMPLOYMENT RATE REMAINED UNCHANGED AT A RELATIVELY LOW 5.8 PERCENT.

YOUR REPORT SHOWS CONTINUED STRENGTH IN OUR ECONOMY THROUGH EXPANSION AND CREATION OF NEW JOBS. THESE FIGURES EXCEEDED THE EXPECTATIONS OF MOST ECONOMIC FORECASTERS.

FOR THE MONTH OF FEBRUARY, THE UNEMPLOYMENT RATE DECREASED BY 0.1 OF A PERCENT TO 5.7 PERCENT. THE NUMBER OF

INDIVIDUALS EMPLOYED , AS SHOWN BY BUSINESS PAYROLLS, INCREASED BY APPROXIMATELY 530,000.

IN THE STATE OF NEW YORK, THE UNEMPLOYMENT RATE FOR THE MONTH OF FEBRUARY DECREASED FROM 4.7 PERCENT TO 3.9 PERCENT. OVERALL, THESE FIGURES PAINT A VERY BRIGHT EMPLOYMENT PICTURE IN OUR NATION.

JANUARY MARKED THE SIXTH CONSECUTIVE MONTH OF EMPLOYMENT INCREASES IN THE MANUFACTURING SECTOR. THE CONSTRUCTION INDUSTRY, ON THE OTHER HAND, HAS SHOWN SIGNS OF WEAKNESS IN THE WAKE OF HIGHER INTEREST RATES LAST FALL. I AM HOPEFUL THAT THE RECENT TREND TOWARD LOWER INTEREST RATES WILL BOOST CONSTRUCTION IN THE COMING MONTHS.

I LOOK FORWARD TO DR. NORWOOD'S TESTIMONY THIS MORNING AND HOPE THAT IT WILL CONTAIN ENCOURAGING EMPLOYMENT INFORMATION FOR THE MONTH OF FEBRUARY.

THANK YOU, MR. CHAIRMAN.

Senator SARBANES. Senator Proxmire.

OPENING STATEMENT OF SENATOR PROXMIRE

Senator PROXMIRE. Let me simply say that I concur in the observations of the chairman that we're unhappy about the level of real income. The circumstances of rising employment and diminishing unemployment, they should go up and it has not.

I'm also very concerned about the fact that minorities are doing much worse. I see that at a time when we have diminishing unemployment and rising jobs the unemployment for blacks is higher than it has been in the third quarter or the fourth quarter in December and January and it was a big increase, an increase from 12.2 to 12.6 percent unemployment. Hispanic has also gone up. It was down in January but it's back up in February and that was an increase of 1.1 percent, a sharp increase. So it looks like, as you were telling us in our informal discussion, the Kerner report of a divided country in which whites are doing well but blacks are not and other minorities are not seems to be persisting.

Thank you, Mr. Chairman.

Senator SARBANES. Thank you very much.

Commissioner, we are prepared to hear from you.

STATEMENT OF HON. JANET L. NORWOOD, COMMISSIONER, BUREAU OF LABOR STATISTICS, DEPARTMENT OF LABOR, ACCOMPANIED BY KENNETH V. DALTON, ASSOCIATE COMMISSIONER, OFFICE OF PRICES AND LIVING CONDITIONS; AND JOHN E. BREGGER, ASSISTANT COMMISSIONER, OFFICE OF CURRENT EMPLOYMENT ANALYSIS

Mrs. NORWOOD. Thank you very much. Mr. Chairman and members of the committee, we are, as always, very pleased to be here.

Employment rose strongly in February as the business survey reversed the weakness in January and the household survey continued to show growth. The overall jobless rate was 5.6 percent in February and the civilian worker rate 5.7 percent. Both rates were below the rates of last fall and nine-tenths of a point below a year ago.

Nonfarm payroll employment rose by 530,000 in February, following a much smaller increase in January. Over the 2 months, the number of payroll jobs grew by an average of 350,000, about the same as the monthly gains in the last quarter of 1987. Over the year, the business survey posted a 3.1 million job increase, and total employment, as measured by the household survey, showed a similar gain.

The service industry's weak performance in January was reversed in February, as the number of jobs in the industry rose by a very large 200,000. The fast growing business and health services industries together accounted for more than half of this advance. Retail trade employment rose in both January and February as post-Christmas cutbacks this year have been much smaller than usual.

Finance, insurance, and real estate was the only service-producing industry that did not show an employment gain in February. The number of jobs in the finance industry itself declined by about

10,000, following several months of slowed job gains. This probably resulted from the employment retrenchment following last October's financial market upheavals.

In the goods-producing sector, construction employment rose by about 105,000, after seasonal adjustment. The number of jobs in this industry had actually declined in January, and growth had been quite weak for much of last year. In manufacturing, where employment had advanced substantially during the second half of 1987, the number of jobs edged up in February. This makes 2 months of very modest factory employment growth.

Civilian employment in the household survey rose by about 280,000 in February after seasonal adjustment, and the proportion of the population employed reached a new high of 62.2 percent.

Jobless rates have fallen sharply over the past year. At 5.7 percent in February, the civilian worker rate was down almost a full percentage point, to its lowest level since July 1979. The rate for adult men declined sharply over the year—from 5.8 to 4.9 percent—while the rate for women dropped from 5.8 to 5.2 percent and that for teenagers moved from 17.9 to 15.4 percent.

Rates for whites, blacks, and Hispanics were down substantially over the year; for all three, the early 1988 jobless rates were at or near the lows recorded in 1979. The rates for minority groups are still quite high; for example, the jobless rate for blacks remains more than twice the rate for whites. Over the last year, however, more than the usual number of blacks and Hispanics entered the labor force, and they obtained 1 in every 3 of the new jobs. Even so, the proportion of blacks with jobs at 56 percent is still much lower than that of whites which is 63 percent.

In summary, employment advanced strongly in February. Very substantial job growth occurred in the service-producing sector, while factory job increases moderated. The drop in unemployment evident in 1987 has been sustained in early 1988.

My colleagues and I will be happy to try to answer any questions you may have.

[The table attached to Mrs. Norwood's statement, together with the Employment Situation press release, follows:]

Unemployment rates of all civilian workers by alternative seasonal adjustment methods

Month and year	Unadjusted rate	X-11 ARIMA method						X-11 method (official method before 1980)	Range (cols. 2-8)
		Official procedure	Concurrent (as first computed)	Concurrent (revised)	Stable	Total	Residual		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
1987									
February....	7.2	6.6	6.6	6.6	6.6	6.6	6.6	6.7	.1
March.......	6.9	6.5	6.5	6.5	6.6	6.5	6.5	6.6	.1
April.......	6.2	6.3	6.3	6.3	6.4	6.3	6.3	6.3	.1
May.........	6.1	6.3	6.3	6.3	6.3	6.3	6.5	6.3	.2
June........	6.3	6.1	6.1	6.1	6.1	6.1	6.2	6.1	.1
July........	6.1	6.0	6.0	6.1	6.0	6.1	6.1	6.0	.1
August......	5.8	6.0	6.0	6.0	6.0	6.1	6.1	6.0	.1
September...	5.7	5.9	5.9	5.9	6.0	5.9	5.9	5.9	.1
October.....	5.7	6.0	6.0	6.0	6.0	5.9	6.0	6.0	.1
November....	5.6	5.9	5.9	5.9	5.9	5.9	5.9	5.9	-
December....	5.4	5.8	5.8	5.8	5.7	5.7	5.8	5.8	.1
1988									
January.....	6.3	5.8	5.8	5.8	5.8	5.8	5.6	5.8	.2
February....	6.2	5.7	5.7	5.7	5.8	5.7	5.6	5.8	.2

SOURCE: U.S. DEPARTMENT OF LABOR
Bureau of Labor Statistics
March 1988

(1) *Unadjusted rate*. Unemployment rate for all civilian workers, not seasonally adjusted.

(2) *Official procedure (X-11 ARIMA method)*. The published seasonally adjusted rate for all civilian workers. Each of the 3 major civilian labor force components--agricultural employment, nonagricultural employment and unemployment--for 4 age-sex groups--males and females, ages 16-19 and 20 years and over--are seasonally adjusted independently using data from January 1974 forward. The data series for each of these 12 components are extended by a year at each end of the original series using ARIMA (Auto-Regressive, Integrated, Moving Average) models chosen specifically for each series. Each extended series is then seasonally adjusted with the X-11 portion of the X-11 ARIMA program. The 4 teenage unemployment and nonagricultural employment components are adjusted with the additive adjustment model, while the other components are adjusted with the multiplicative model. The unemployment rate is computed by summing the 4 seasonally adjusted unemployment components and calculating that total as a percent of the civilian labor force total derived by summing all 12 seasonally adjusted components. All the seasonally adjusted series are revised at the end of each year. Extrapolated factors for January-June are computed at the beginning of each year; extrapolated factors for July-December are computed in the middle of the year after the June data become available. Each set of 6-month factors are published in advance, in the January and July issues, respectively, of *Employment and Earnings*.

(3) *Concurrent (as first computed, X-11 ARIMA method)*. The official procedure for computation of the rate for all civilian workers using the 12 components is followed except that extrapolated factors are not used at all. Each component is seasonally adjusted with the X-11 ARIMA program each month as the most recent data become available. Rates for each month of the current year are shown as first computed; they are revised only once each year, at the end of the year when data for the full year become available. For example, the rate for January 1984 would be based, during 1984, on the adjustment of data from the period January 1974 through January 1984.

(4) *Concurrent (revised, X-11 ARIMA method)*. The procedure used is identical to (3) above, and the rate for the current month (the last month displayed) will always be the same in the two columns. However, all previous months are subject to revision each month based on the seasonal adjustment of all the components with data through the current month.

(5) *Stable (X-11 ARIMA method)*. Each of the 12 civilian labor force components is extended using ARIMA models as in the official procedure and then run through the X-11 part of the program using the stable option. This option assumes that seasonal patterns are basically constant from year-to-year and computes final seasonal factors as unweighted averages of all the seasonal-irregular components for each month across the entire span of the period adjusted. As in the official procedure, factors are extrapolated in 6-month intervals and the series are revised at the end of each year. The procedure for computation of the rate from the seasonally adjusted components is also identical to the official procedure.

(6) *Total (X-11 ARIMA method)*. This is one alternative aggregation procedure, in which total unemployment and civilian labor force levels are extended with ARIMA models and directly adjusted with multiplicative adjustment models in the X-11 part of the program. The rate is computed by taking seasonally adjusted total unemployment as a percent of seasonally adjusted total civilian labor force. Factors are extrapolated in 6-month intervals and the series revised at the end of each year.

(7) *Residual (X-11 ARIMA method)*. This is another alternative aggregation method, in which total civilian employment and civilian labor force levels are extended using ARIMA models and then directly adjusted with multiplicative adjustment models. The seasonally adjusted unemployment level is derived by subtracting seasonally adjusted employment from seasonally adjusted labor force. The rate is then computed by taking the derived unemployment level as a percent of the labor force level. Factors are extrapolated in 6-month intervals and the series revised at the end of each year.

(8) *X-11 method (official method before 1980)*. The method for computation of the official procedure is used except that the series are not extended with ARIMA models and the factors are projected in 12-month intervals. The standard X-11 program is used to perform the seasonal adjustment.

Methods of Adjustment: The X-11 ARIMA method was developed at Statistics Canada by the Seasonal Adjustment and Times Series Staff under the direction of Estela Bee Dagum. The method is described in *The X-11 ARIMA Seasonal Adjustment Method*, by Estela Bee Dagum, Statistics Canada Catalogue No. 12-564E, February 1980.

The standard X-11 method is described in *X-11 Variant of the Census Method II Seasonal Adjustment Program*, by Julius Shiskin, Allan Young and John Musgrave (Technical Paper No. 15, Bureau of the Census, 1967).

News United States Department of Labor

Bureau of Labor Statistics Washington, D.C. 20212

Technical Information: (202) 523-1371
523-1944
523-1959
Media contact: 523-1913

USDL 88-103

TRANSMISSION OF MATERIAL IN THIS RELEASE IS EMBARGOED UNTIL 8:30 A.M. (EST), FRIDAY, MARCH 4, 1988

THE EMPLOYMENT SITUATION: FEBRUARY 1988

Employment growth was quite strong in February, the Bureau of Labor Statistics of the U. S. Department of Labor reported today. The overall jobless rate was 5.6 percent, and the civilian worker rate was 5.7 percent. Both have edged down in recent months--by three-tenths of a percentage point since last October.

Nonagricultural payroll employment, as measured by the survey of business establishments, surged by 530,000 in February, following a relatively small increase in the prior month. Total civilian employment, as measured by the household survey, rose by nearly 300,000 over the month.

Unemployment (Household Survey Data)

The number of persons unemployed in February, at 6.9 million, seasonally adjusted, was about the same as in January. The civilian worker unemployment rate, at 5.7 percent, also showed little over-the-month change. However, it has edged down by three-tenths since last October and was nearly a full percentage point lower than a year ago.

Jobless rates for adult men (4.9 percent), adult women (5.2 percent), teenagers (15.4 percent), whites (4.8 percent), and blacks (12.6 percent) showed little change in February. After dipping in January, the Hispanic unemployment rate (8.3 percent) returned to the levels that generally prevailed in the latter half of last year. (See tables A-2 and A-3.)

The median duration of unemployment--6.4 weeks--was unchanged from January and was slightly lower than a year earlier. The number and proportion of the total unemployed who had lost their last jobs declined markedly over the past year. (See tables A-7 and A-8.)

Civilian Employment and the Labor Force (Household Survey Data)

Total civilian employment rose by 280,000 in February to 114.4 million, seasonally adjusted, with almost the entire gain taking place among adult men. The proportion of the population with jobs was at a record 62.2 percent. Recent employment growth has been particularly strong in executive, administrative, and managerial occupations. Over the past year, employment in these occupations has accounted for more than a third of the 3 million growth in total civilian employment. (See tables A-2 and A-11.)

The civilian labor force grew to a level of 121.4 million in February, seasonally adjusted, with the labor force participation rate edging up to 66.0 percent. Since last February, the labor force has grown by 2.0 million, with nearly two-thirds of the increase occurring among adult women. (See table A-2.)

Table A. Major indicators of labor market activity, seasonally adjusted

Category	Quarterly averages		Monthly data			Jan.-Feb. change
	1987		1987	1988		
	III	IV	Dec.	Jan.	Feb.	
HOUSEHOLD DATA						
	Thousands of persons					
Labor force 1/	121,786	122,316	122,472	122,924	123,084	160
Total employment 1/	114,587	115,235	115,494	115,878	116,145	267
Civilian labor force	120,053	120,568	120,722	121,175	121,348	173
Civilian employment	112,854	113,486	113,744	114,129	114,409	280
Unemployment	7,199	7,082	6,978	7,046	6,938	-108
Not in labor force	62,963	62,899	62,898	62,647	62,621	-26
Discouraged workers	992	910	N.A.	N.A.	N.A.	N.A.
	Percent of labor force					
Unemployment rates:						
All workers 1/	5.9	5.8	5.7	5.7	5.6	-0.1
All civilian workers	6.0	5.9	5.8	5.8	5.7	-.1
Adult men	5.2	5.0	4.9	5.1	4.9	-.2
Adult women	5.3	5.2	5.2	5.1	5.2	.1
Teenagers	16.1	16.6	16.1	16.0	15.4	-.6
White	5.1	5.0	4.9	5.0	4.8	-.2
Black	12.5	12.2	12.2	12.2	12.6	.4
Hispanic origin	8.1	8.5	8.1	7.2	8.3	1.1
ESTABLISHMENT DATA						
	Thousands of jobs					
Nonfarm employment	102,278	103,293	103,612	p103,786	p104,317	p531
Goods-producing	24,884	25,164	25,259	p25,204	p25,332	p128
Service-producing	77,394	78,129	78,353	p78,582	p78,985	p403
	Hours of work					
Average weekly hours:						
Total private	34.8	34.8	34.6	p34.7	p34.9	p0.2
Manufacturing	40.9	41.2	41.0	p41.1	p40.9	p-.2
Overtime	3.7	3.9	3.8	p3.9	p3.8	p-.1

1/ Includes the resident Armed Forces. N.A.=not available.
p=preliminary.

Industry Payroll Employment (Establishment Survey Data)

Total nonagricultural payroll employment rose by 530,000 in February, seasonally adjusted, to a level of 104.3 million. This large gain, which followed a much smaller increase in January (175,000), occurred mostly in the service-producing sector. While construction also advanced, manufacturing was little changed. (See table B-1.)

Within the service-producing sector, employment in the services industry increased sharply (200,000), following a modest rise in January. Job gains were widespread, with health and business services rising by 60,000 and 55,000, respectively. Other industries with increases were retail trade, which rose by 110,000 after seasonal adjustment, and wholesale trade. Employment in finance, insurance, and real estate was little changed over the month, although the finance component declined by 10,000; this drop represents the first tangible impact on business payrolls of the October stock market crash.

In the goods-producing sector, construction jobs rose by 105,000 after seasonal adjustment, following a substantial decline in January. After showing large gains in the second half of 1987, manufacturing jobs were up only slightly for the second month in a row. Changes among the component industries were all quite small. Since last June, manufacturing payrolls have added 400,000 jobs. Mining was about unchanged in February.

Weekly Hours (Establishment Survey Data)

The average workweek for all production or nonsupervisory workers on private nonagricultural payrolls increased 0.2 hour in February to 34.9 hours, seasonally adjusted. By contrast, the manufacturing workweek declined 0.2 hour to 40.9 hours, and factory overtime edged down 0.1 hour to 3.8 hours; both measures, however, were still relatively high by historical standards. (See table B-2.)

The index of aggregate weekly hours of production or nonsupervisory workers on private nonagricultural payrolls rose by 0.7 percent to 123.2 (1977=100), seasonally adjusted. The manufacturing index slipped to 95.3, reflecting the decline in the factory workweek. (See table B-5.)

Hourly and Weekly Earnings (Establishment Survey Data)

Average hourly earnings of private production or nonsupervisory workers edged down by 0.2 percent in February, seasonally adjusted, while average weekly earnings rose 0.4 percent due to the increase in the workweek. Prior to seasonal adjustment, average hourly earnings inched down 1 cent to $9.17, and average weekly earnings rose 58 cents to $316.37. (See table B-3.)

The Hourly Earnings Index (Establishment Survey Data)

The Hourly Earnings Index (HEI) was 176.5 (1977=100) in February, seasonally adjusted, virtually unchanged from January. For the 12 months ended in February, the increase was 2.7 percent. In dollars of constant purchasing power, the HEI decreased 1.0 percent during the 12-month period ending in January. The HEI excludes the effects of two types of changes unrelated to underlying wage rate movements--fluctuations in manufacturing overtime and interindustry employment shifts. (See table B-4.)

The Employment Situation for March 1988 will be released on Friday, April 1, at 8:30 A.M. (EST).

Explanatory Note

This news release presents statistics from two major surveys, the Current Population Survey (household survey) and the Current Employment Statistics Survey (establishment survey). The household survey provides the information on the labor force, total employment, and unemployment that appears in the A tables, marked HOUSEHOLD DATA. It is a sample survey of about 59,500 households that is conducted by the Bureau of the Census with most of the findings analyzed and published by the Bureau of Labor Statistics (BLS).

The establishment survey provides the information on the employment, hours, and earnings of workers on nonagricultural payrolls that appears in the B tables, marked ESTABLISHMENT DATA. This information is collected from payroll records by BLS in cooperation with State agencies. The sample includes over 290,000 establishments employing over 38 million people.

For both surveys, the data for a given month are actually collected for and relate to a particular week. In the household survey, unless otherwise indicated, it is the calendar week that contains the 12th day of the month, which is called the survey week. In the establishment survey, the reference week is the pay period including the 12th, which may or may not correspond directly to the calendar week.

The data in this release are affected by a number of technical factors, including definitions, survey differences, seasonal adjustments, and the inevitable variance in results between a survey of a sample and a census of the entire population. Each of these factors is explained below.

Coverage, definitions, and differences between surveys

The sample households in the household survey are selected so as to reflect the entire civilian noninstitutional population 16 years of age and older. Each person in a household is classified as employed, unemployed, or not in the labor force. Those who hold more than one job are classified according to the job at which they worked the most hours.

People are classified as *employed* if they did any work at all as paid civilians; worked in their own business or profession or on their own farm; or worked 15 hours or more in an enterprise operated by a member of their family, whether they were paid or not. People are also counted as employed if they were on unpaid leave because of illness, bad weather, disputes between labor and management, or personal reasons. Members of the Armed Forces stationed in the United States are also included in the employed total.

People are classified as *unemployed*, regardless of their eligibility for unemployment benefits or public assistance, if they meet all of the following criteria: They had no employment during the survey week; they were available for work at that time; and they made specific efforts to find employment sometime during the prior 4 weeks. Persons laid off from their former jobs and awaiting recall and those expecting to report to a job within 30 days need not be looking for work to be counted as unemployed.

The *labor force* equals the sum of the number employed and the number unemployed. The *unemployment rate* is the percentage of unemployed people in the labor force (civilian plus the resident Armed Forces). Table A-5 presents a special grouping of seven measures of unemployment based on varying definitions of unemployment and the labor force. The definitions are provided in the table. The most restrictive definition yields U-1 and the most comprehensive yields U-7. The overall unemployment rate is U-5a, while U-5b represents the same measure with a civilian labor force base.

Unlike the household survey, the establishment survey only counts wage and salary employees whose names appear on the payroll records of nonagricultural firms. As a result, there are many differences between the two surveys, among which are the following:

— The household survey, although based on a smaller sample, reflects a larger segment of the population; the establishment survey excludes agriculture, the self-employed, unpaid family workers, private household workers, and members of the resident Armed Forces;

— The household survey includes people on unpaid leave among the employed; the establishment survey does not;

— The household survey is limited to those 16 years of age and older; the establishment survey is not limited by age;

— The household survey has no duplication of individuals, because each individual is counted only once; in the establishment survey, employees working at more than one job or otherwise appearing on more than one payroll would be counted separately for each appearance.

Other differences between the two surveys are described in "Comparing Employment Estimates from Household and Payroll Surveys," which may be obtained from the BLS upon request.

Seasonal adjustment

Over the course of a year, the size of the Nation's labor force and the levels of employment and unemployment undergo sharp fluctuations due to such seasonal events as changes in weather, reduced or expanded production, harvests, major holidays, and the opening and closing of schools. For example, the labor force increases by a large number each June, when schools close and many young people enter the job market. The effect of such seasonal variation can be very large; over the course of a year, for example, seasonality may account for as much as 95 percent of the month-to-month changes in unemployment.

Because these seasonal events follow a more or less regular pattern each year, their influence on statistical trends can be eliminated by adjusting the statistics from month to month. These adjustments make nonseasonal developments, such as declines in economic activity or increases in the participation of women in the labor force, easier to spot. To return to the school's-out example, the large number of people entering the labor force each June is likely to obscure any other changes that have taken place since May, making it difficult to determine if the level of economic activity has risen or declined. However, because the effect of students finishing school in previous years is known, the statistics for the current year can be adjusted to allow for a comparable change. Insofar as the seasonal adjustment ~~is~~ made correctly, the adjusted figure provides a more useful tool with which to analyze changes in economic activity.

Measures of labor force, employment, and unemployment contain components such as age and sex. Statistics for all employees, production workers, average weekly hours, and average hourly earnings include components based on the employer's industry. All these statistics can be seasonally adjusted either by adjusting the total or by adjusting each of the components and combining them. The second procedure usually yields more accurate information and is therefore followed by BLS. For example, the seasonally adjusted figure for the labor force is the sum of eight seasonally adjusted civilian employment components, plus the resident Armed Forces total (not adjusted for seasonality), and four seasonally adjusted unemployment components; the total for unemployment is the sum of the four unemployment components; and the overall unemployment rate is derived by dividing the resulting estimate of total unemployment by the estimate of the labor force.

The numerical factors used to make the seasonal adjustments are recalculated regularly. For the household survey, the factors are calculated for the January-June period and again for the July-December period. The January revision is applied to data that have been published over the previous 5 years. For the establishment survey, updated factors for seasonal adjustment are calculated only once a year, along with the introduction of new benchmarks which are discussed at the end of the next section.

Sampling variability

Statistics based on the household and establishment surveys are subject to sampling error, that is, the estimate of the number of people employed and the other estimates drawn from these surveys probably differ from the figures that would be obtained from a complete census, even if the same questionnaires and procedures were used. In the household survey, the amount of the differences can be expressed in terms of standard errors. The numerical value of a standard error depends upon the size of the sample, the results of the survey, and other factors. However, the numerical value is always such that the chances are approximately 68 out of 100 that an estimate based on the sample will differ by no more than the standard error from the results of a complete census. The chances are approximately 90 out of 100 that an estimate based on the sample will differ by no more than 1.6 times the standard error from the results of a complete census. At approximately the 90-percent level of confidence—the confidence limits used by BLS in its analyses—the error for the monthly change in total employment is on the order of plus or minus 328,000; for total unemployment it is 220,000; and, for the overall unemployment rate, it is 0.19 percentage point. These figures do not mean that the sample results are off by these magnitudes but, rather, that the chances are approximately 90 out of 100 that the "true" level or rate would not be expected to differ from the estimates by more than these amounts.

Sampling errors for monthly surveys are reduced when the data are cumulated for several months, such as quarterly or annually. Also, as a general rule, the smaller the estimate, the larger the sampling error. Therefore, relatively speaking, the estimate of the size of the labor force is subject to less error than is the estimate of the number unemployed. And, among the unemployed, the sampling error for the jobless rate of adult men, for example, is much smaller than is the error for the jobless rate of teenagers. Specifically, the error on monthly change in the jobless rate for men is .26 percentage point; for teenagers, it is 1.25 percentage points.

In the establishment survey, estimates for the 2 most current months are based on incomplete returns; for this reason, these estimates are labeled preliminary in the tables. When all the returns in the sample have been received, the estimates are revised. In other words, data for the month of September are published in preliminary form in October and November and in final form in December. To remove errors that build up over time, a comprehensive count of the employed is conducted each year. The results of this survey are used to establish new benchmarks—comprehensive counts of employment—against which month-to-month changes can be measured. The new benchmarks also incorporate changes in the classification of industries and allow for the formation of new establishments.

Additional statistics and other information

In order to provide a broad view of the Nation's employment situation, BLS regularly publishes a wide variety of data in this news release. More comprehensive statistics are contained in *Employment and Earnings*, published each month by BLS. It is available for $8.50 per issue or $22.00 per year from the U.S. Government Printing Office, Washington, D.C., 20204. A check or money order made out to the Superintendent of Documents must accompany all orders.

Employment and Earnings also provides approximations of the standard errors for the household survey data published in this release. For unemployment and other labor force categories, the standard errors appear in tables B through J of its "Explanatory Notes." Measures of the reliability of the data drawn from the establishment survey and the actual amounts of revision due to benchmark adjustments are provided in tables M, O, P, and Q of that publication.

Table A-1. Employment status of the population, including Armed Forces in the United States, by sex

(Numbers in thousands)

Employment status and sex	Not seasonally adjusted			Seasonally adjusted[1]					
	Feb. 1987	Jan. 1988	Feb. 1988	Feb. 1987	Oct. 1987	Nov. 1987	Dec. 1987	Jan. 1988	Feb. 1988
TOTAL									
Noninstitutional population[2]	183,738	185,571	185,705	183,738	185,052	185,225	185,370	185,571	185,705
Labor force[2]	119,707	121,491	121,678	120,970	122,128	122,349	122,472	122,924	123,084
Participation rate[3]	65.2	65.5	65.5	65.8	66.0	66.1	66.1	66.2	66.3
Total employed[2]	111,204	113,888	114,196	113,084	114,951	115,259	115,494	115,878	116,145
Employment-population ratio[4]	60.5	61.4	61.5	61.5	62.1	62.2	62.3	62.4	62.5
Resident Armed Forces	1,740	1,749	1,736	1,740	1,741	1,755	1,750	1,749	1,736
Civilian employed	109,464	112,139	112,460	111,344	113,210	113,504	113,744	114,129	114,409
Agriculture	2,764	2,789	2,760	3,225	3,249	3,172	3,215	3,293	3,226
Nonagricultural industries	106,700	109,350	109,700	108,119	109,961	110,332	110,529	110,836	111,182
Unemployed	8,503	7,603	7,482	7,886	7,177	7,090	6,978	7,046	6,938
Unemployment rate[5]	7.1	6.3	6.1	6.5	5.9	5.8	5.7	5.7	5.6
Not in labor force	64,031	64,079	64,026	62,768	62,924	62,876	62,898	62,647	62,621
Men, 16 years and over									
Noninstitutional population[2]	88,099	89,033	89,099	88,099	88,756	88,849	88,924	89,033	89,099
Labor force[2]	66,898	67,410	67,484	67,655	67,947	68,019	68,030	68,243	68,343
Participation rate[3]	75.9	75.7	75.7	76.8	76.6	76.6	76.5	76.6	76.7
Total employed[2]	61,921	63,046	63,252	63,281	64,048	64,174	64,245	64,396	64,636
Employment-population ratio[4]	70.3	70.8	71.0	71.8	72.2	72.2	72.2	72.3	72.5
Resident Armed Forces	1,584	1,588	1,577	1,584	1,580	1,593	1,589	1,588	1,577
Civilian employed	60,337	61,458	61,675	61,697	62,468	62,581	62,656	62,808	63,059
Unemployed	4,976	4,364	4,232	4,374	3,899	3,845	3,785	3,847	3,707
Unemployment rate[5]	7.4	6.5	6.3	6.5	5.7	5.7	5.6	5.6	5.4
Women, 16 years and over									
Noninstitutional population[2]	95,639	96,538	96,606	95,639	96,295	96,376	96,446	96,538	96,606
Labor force[2]	52,809	54,082	54,195	53,315	54,181	54,330	54,442	54,681	54,740
Participation rate[3]	55.2	56.0	56.1	55.7	56.3	56.4	56.4	56.6	56.7
Total employed[2]	49,282	50,842	50,944	49,803	50,903	51,085	51,249	51,482	51,509
Employment-population ratio[4]	51.5	52.7	52.7	52.1	52.9	53.0	53.1	53.3	53.3
Resident Armed Forces	156	161	159	156	161	162	161	161	159
Civilian employed	49,126	50,681	50,785	49,647	50,742	50,923	51,088	51,321	51,350
Unemployed	3,527	3,239	3,250	3,512	3,278	3,245	3,193	3,200	3,231
Unemployment rate[5]	6.7	6.0	6.0	6.6	6.1	6.0	5.9	5.9	5.9

---

[1] The population and Armed Forces figures are not adjusted for seasonal variation; therefore, identical numbers appear in the unadjusted and seasonally adjusted columns.

[2] Includes members of the Armed Forces stationed in the United States.

[3] Labor force as a percent of the noninstitutional population.

[4] Total employment as a percent of the noninstitutional population.

[5] Unemployment as a percent of the labor force (including the resident Armed Forces).

Table A-2. Employment status of the civilian population by sex and age

(Numbers in thousands)

Employment status, sex, and age	Not seasonally adjusted			Seasonally adjusted[1]					
	Feb. 1987	Jan. 1988	Feb. 1988	Feb. 1987	Oct. 1987	Nov. 1987	Dec. 1987	Jan. 1988	Feb. 1988
TOTAL									
Civilian noninstitutional population	181,998	183,822	183,969	181,998	183,311	183,470	183,620	183,822	183,969
Civilian labor force	117,967	119,742	119,942	119,230	120,387	120,594	120,722	121,175	121,348
Participation rate	64.8	65.1	65.2	65.5	65.7	65.7	65.7	65.9	66.0
Employed	109,464	112,139	112,460	111,344	113,210	113,504	113,744	114,129	114,409
Employment-population ratio[2]	60.1	61.0	61.1	61.2	61.8	61.9	61.9	62.1	62.2
Unemployed	8,503	7,603	7,482	7,886	7,177	7,090	6,978	7,046	6,939
Unemployment rate	7.2	6.3	6.2	6.6	6.0	5.9	5.8	5.8	5.7
Men, 20 years and over									
Civilian noninstitutional population	79,216	80,120	80,203	79,216	79,807	79,885	80,002	80,120	80,203
Civilian labor force	61,548	62,031	62,205	61,930	62,211	62,299	62,248	62,440	62,696
Participation rate	77.7	77.4	77.6	78.2	78.0	78.0	77.8	77.9	78.2
Employed	57,356	58,357	58,626	58,324	59,037	59,164	59,185	59,287	59,625
Employment-population ratio[2]	72.4	72.8	73.1	73.6	74.0	74.1	74.0	74.0	74.3
Agriculture	2,061	2,077	2,027	2,317	2,343	2,297	2,298	2,323	2,280
Nonagricultural industries	55,295	56,280	56,599	56,007	56,694	56,867	56,887	56,964	57,344
Unemployed	4,192	3,674	3,579	3,606	3,174	3,135	3,063	3,154	3,071
Unemployment rate	6.8	5.9	5.8	5.8	5.1	5.0	4.9	5.1	4.9
Women, 20 years and over									
Civilian noninstitutional population	88,237	89,110	89,178	88,237	88,843	88,923	89,010	89,110	89,178
Civilian labor force	49,146	50,317	50,407	49,343	50,095	50,254	50,361	50,558	50,640
Participation rate	55.7	56.5	56.5	55.9	56.4	56.5	56.6	56.7	56.8
Employed	46,232	47,633	47,714	46,485	47,480	47,634	47,750	47,977	48,005
Employment-population ratio[2]	52.4	53.5	53.5	52.7	53.4	53.6	53.6	53.8	53.8
Agriculture	535	539	552	634	636	636	643	646	654
Nonagricultural industries	45,697	47,094	47,162	45,851	46,844	46,998	47,107	47,331	47,351
Unemployed	2,914	2,684	2,693	2,858	2,615	2,620	2,611	2,581	2,636
Unemployment rate	5.9	5.3	5.3	5.8	5.2	5.2	5.2	5.1	5.2
Both sexes, 16 to 19 years									
Civilian noninstitutional population	14,546	14,592	14,588	14,546	14,661	14,663	14,608	14,592	14,588
Civilian labor force	7,271	7,394	7,331	7,957	8,081	8,041	8,113	8,177	8,011
Participation rate	50.0	50.7	50.2	54.7	55.1	54.8	55.5	56.0	54.9
Employed	5,875	6,150	6,120	6,535	6,693	6,706	6,809	6,865	6,779
Employment-population ratio[2]	40.4	42.1	42.0	44.9	45.7	45.7	46.6	47.0	46.5
Agriculture	168	173	181	274	270	239	274	323	293
Nonagricultural industries	5,707	5,977	5,939	6,261	6,423	6,467	6,535	6,542	6,486
Unemployed	1,396	1,244	1,211	1,422	1,388	1,335	1,304	1,312	1,232
Unemployment rate	19.2	16.8	16.5	17.9	17.2	16.6	16.1	16.0	15.4

---

[1] The population figures are not adjusted for seasonal variation; therefore, identical numbers appear in the unadjusted and seasonally adjusted columns.

[2] Civilian employment as a percent of the civilian noninstitutional population.

Table A-3. Employment status of the civilian population by race, sex, age, and Hispanic origin

(Numbers in thousands)

Employment status, race, sex, age, and Hispanic origin	Not seasonally adjusted			Seasonally adjusted[1]					
	Feb. 1987	Jan. 1988	Feb. 1988	Feb. 1987	Oct. 1987	Nov. 1987	Dec. 1987	Jan. 1988	Feb. 1988
WHITE									
Civilian noninstitutional population	156,431	157,676	157,773	156,431	157,342	157,449	157,562	157,676	157,773
Civilian labor force	101,809	103,120	103,398	102,825	103,669	103,731	103,907	104,252	104,530
Participation rate	65.1	65.4	65.5	65.7	65.9	65.9	66.0	66.1	66.3
Employed	95,377	97,311	97,819	97,001	98,317	98,492	98,779	99,044	99,474
Employment-population ratio[2]	61.0	61.7	62.0	62.0	62.5	62.6	62.7	62.8	63.0
Unemployed	6,432	5,809	5,579	5,824	5,352	5,239	5,128	5,208	5,056
Unemployment rate	6.3	5.6	5.4	5.7	5.2	5.1	4.9	5.0	4.8
Men, 20 years and over									
Civilian labor force	53,840	54,135	54,268	54,121	54,375	54,381	54,368	54,455	54,650
Participation rate	78.1	77.8	77.9	78.5	78.4	78.3	78.2	78.3	78.5
Employed	50,540	51,220	51,551	51,366	51,864	51,969	52,046	52,053	52,389
Employment-population ratio[2]	73.3	73.6	74.0	74.5	74.8	74.9	74.9	74.8	75.2
Unemployed	3,300	2,914	2,717	2,755	2,511	2,412	2,322	2,402	2,260
Unemployment rate	6.1	5.4	5.0	5.1	4.6	4.4	4.3	4.4	4.1
Women, 20 years and over									
Civilian labor force	41,639	42,545	42,748	41,780	42,379	42,464	42,569	42,710	42,915
Participation rate	55.1	55.8	56.1	55.3	55.7	55.8	55.9	56.1	56.3
Employed	39,576	40,610	40,780	39,755	40,538	40,606	40,712	40,896	40,985
Employment-population ratio[2]	52.3	53.3	53.5	52.6	53.3	53.4	53.5	53.7	53.8
Unemployed	2,062	1,935	1,968	2,025	1,841	1,858	1,857	1,813	1,930
Unemployment rate	5.0	4.5	4.6	4.8	4.3	4.4	4.4	4.2	4.5
Both sexes, 16 to 19 years									
Civilian labor force	6,330	6,441	6,381	6,924	6,915	6,886	6,970	7,087	6,965
Participation rate	53.2	54.2	53.7	58.1	57.9	57.7	58.6	59.6	58.6
Employed	5,261	5,481	5,488	5,880	5,915	5,917	6,021	6,095	6,100
Employment-population ratio[2]	44.2	46.1	46.2	49.4	49.5	49.6	50.6	51.2	51.3
Unemployed	1,070	960	893	1,044	1,000	969	949	992	865
Unemployment rate	16.9	14.9	14.0	15.1	14.5	14.1	13.6	14.0	12.4
Men	18.9	16.3	14.8	16.0	15.1	14.8	14.9	14.4	12.2
Women	14.8	13.4	13.2	14.1	13.8	13.3	12.3	13.6	12.7
BLACK									
Civilian noninstitutional population	20,218	20,539	20,569	20,218	20,453	20,482	20,508	20,539	20,569
Civilian labor force	12,696	12,967	12,965	12,894	13,152	13,193	13,215	13,222	13,168
Participation rate	62.8	63.1	63.0	63.8	64.3	64.4	64.4	64.4	64.0
Employed	10,872	11,417	11,288	11,086	11,556	11,589	11,605	11,608	11,504
Employment-population ratio[2]	53.8	55.6	54.9	54.8	56.5	56.6	56.6	56.5	56.9
Unemployed	1,824	1,550	1,678	1,808	1,596	1,604	1,610	1,614	1,663
Unemployment rate	14.4	12.0	12.9	14.0	12.1	12.2	12.2	12.2	12.6
Men, 20 years and over									
Civilian labor force	5,927	6,029	6,094	5,996	6,023	6,045	6,043	6,115	6,166
Participation rate	74.0	74.0	74.7	74.9	74.3	74.5	74.3	75.0	75.6
Employed	5,166	5,398	5,352	5,283	5,431	5,430	5,430	5,497	5,472
Employment-population ratio[2]	64.5	66.2	65.6	66.0	67.0	66.9	66.8	67.5	67.1
Unemployed	761	631	742	713	592	615	613	618	694
Unemployment rate	12.8	10.5	12.2	11.9	9.8	10.2	10.1	10.1	11.3
Women, 20 years and over									
Civilian labor force	5,991	6,189	6,114	6,005	6,177	6,207	6,224	6,244	6,131
Participation rate	59.5	60.6	59.7	59.7	60.7	60.9	61.0	61.1	59.9
Employed	5,218	5,528	5,462	5,249	5,495	5,537	5,544	5,550	5,495
Employment-population ratio[2]	51.9	54.1	53.4	52.2	54.0	54.3	54.3	54.3	53.7
Unemployed	773	661	652	756	682	670	680	694	636
Unemployment rate	12.9	10.7	10.7	12.6	11.0	10.8	10.9	11.1	10.4
Both sexes, 16 to 19 years									
Civilian labor force	778	749	757	893	952	941	948	863	870
Participation rate	36.2	34.5	34.8	41.6	43.8	43.3	43.7	39.8	40.0
Employed	488	492	473	554	630	622	631	561	537
Employment-population ratio[2]	22.7	22.7	21.8	25.8	29.0	28.6	29.1	25.8	24.7
Unemployed	290	257	284	339	322	319	317	302	333
Unemployment rate	37.2	34.4	37.5	38.0	33.8	33.9	33.4	35.0	38.3
Men	38.3	35.2	42.9	37.9	32.5	32.2	33.5	35.1	42.0
Women	36.2	33.5	32.5	38.0	35.2	35.8	33.4	34.9	34.7

See footnotes at end of table.

Table A-3. Employment status of the civilian population by race, sex, age, and Hispanic origin—Continued

(Numbers in thousands)

Employment status, race, sex, age, and Hispanic origin	Not seasonally adjusted			Seasonally adjusted[1]					
	Feb. 1987	Jan. 1988	Feb. 1988	Feb. 1987	Oct. 1987	Nov. 1987	Dec. 1987	Jan. 1988	Feb. 1988
HISPANIC ORIGIN									
Civilian noninstitutional population	12,692	13,115	13,153	12,692	13,003	13,043	13,082	13,115	13,153
Civilian labor force	8,329	8,758	8,905	8,423	8,654	8,763	8,772	8,879	9,017
Participation rate	65.6	66.8	67.7	66.4	66.6	67.2	67.1	67.7	68.6
Employed	7,445	8,040	8,085	7,614	7,935	7,978	8,058	8,236	8,268
Employment-population ratio[2]	58.7	61.3	61.5	60.0	61.0	61.2	61.6	62.8	62.9
Unemployed	884	718	820	809	719	785	714	642	749
Unemployment rate	10.6	8.2	9.2	9.6	8.3	9.0	8.1	7.2	8.3

---

[1] The population figures are not adjusted for seasonal variation; therefore, identical numbers appear in the unadjusted and seasonally adjusted columns.

[2] Civilian employment as a percent of the civilian noninstitutional population.

NOTE: Detail for the above race and Hispanic-origin groups will not sum to totals because data for the "other races" group are not presented and Hispanics are included in both the white and black population groups.

Table A-4. Selected employment indicators

(In thousands)

Category	Not seasonally adjusted			Seasonally adjusted					
	Feb. 1987	Jan. 1988	Feb. 1988	Feb. 1987	Oct. 1987	Nov. 1987	Dec. 1987	Jan. 1988	Feb. 1988
CHARACTERISTIC									
Civilian employed, 16 years and over	109,464	112,139	112,460	111,344	113,210	113,504	113,744	114,129	114,409
Married men, spouse present	39,354	40,000	39,868	39,958	40,566	40,645	40,711	40,404	40,475
Married women, spouse present	27,622	28,185	28,477	27,837	28,099	28,175	28,249	28,441	28,707
Women who maintain families	5,924	6,174	6,157	5,925	6,178	6,237	6,227	6,168	6,157
MAJOR INDUSTRY AND CLASS OF WORKER									
Agriculture:									
Wage and salary workers	1,375	1,368	1,407	1,640	1,705	1,586	1,599	1,666	1,677
Self-employed workers	1,297	1,325	1,274	1,440	1,430	1,407	1,450	1,454	1,414
Unpaid family workers	92	95	79	132	140	155	156	138	114
Nonagricultural industries:									
Wage and salary workers	98,456	101,065	101,341	99,772	101,522	101,943	101,997	102,507	102,683
Government	16,879	17,214	17,270	16,553	17,033	17,118	17,064	17,197	16,948
Private industries	81,576	83,851	84,071	83,219	84,489	84,825	84,933	85,310	85,735
Private households	1,128	1,071	1,087	1,213	1,222	1,286	1,200	1,147	1,170
Other industries	80,448	82,780	82,984	82,006	83,267	83,539	83,733	84,163	84,565
Self-employed workers	8,007	8,060	8,146	8,166	8,274	8,222	8,260	8,150	8,312
Unpaid family workers	237	226	213	254	242	235	248	237	228
PERSONS AT WORK PART TIME[1]									
All industries:									
Part time for economic reasons	5,583	5,394	5,377	5,766	5,353	5,534	5,262	5,367	5,566
Slack work	2,692	2,683	2,661	2,501	2,377	2,408	2,284	2,396	2,478
Could only find part-time work	2,548	2,405	2,390	2,773	2,655	2,696	2,638	2,640	2,598
Voluntary part time	14,947	14,906	15,446	14,110	14,488	14,523	14,711	14,571	14,572
Nonagricultural industries:									
Part time for economic reasons	5,328	5,191	5,117	5,458	5,067	5,241	5,004	5,145	5,254
Slack work	2,499	2,527	2,504	2,315	2,196	2,209	2,111	2,260	2,327
Could only find part-time work	2,501	2,363	2,292	2,682	2,557	2,597	2,552	2,566	2,457
Voluntary part time	14,535	14,491	15,055	13,635	14,011	14,064	14,222	14,096	14,123

---

[1] Excludes persons "with a job but not at work" during the survey period for such reasons as vacation, illness, or industrial dispute.

Table A-5. Range of unemployment measures based on varying definitions of unemployment and the labor force, seasonally adjusted

(Percent)

Measure	Quarterly averages					Monthly data		
	1986	1987				1987	1988	
	IV	I	II	III	IV	Dec.	Jan.	Feb.
U-1 Persons unemployed 15 weeks or longer as a percent of the civilian labor force	1.9	1.8	1.7	1.6	1.5	1.5	1.4	1.4
U-2 Job losers as a percent of the civilian labor force	3.3	3.2	3.0	2.8	2.7	2.7	2.6	2.6
U-3 Unemployed persons 25 years and over as a percent of the civilian labor force	5.4	5.1	4.8	4.6	4.5	4.5	4.5	4.5
U-4 Unemployed full-time jobseekers as a percent of the full-time civilian labor force	6.5	6.2	5.9	5.6	5.5	5.4	5.4	5.3
U-5a Total unemployed as a percent of the labor force, including the resident Armed Forces	6.8	6.5	6.2	5.9	5.8	5.7	5.7	5.6
U-5b Total unemployed as a percent of the civilian labor force	6.8	6.6	6.3	6.0	5.9	5.8	5.8	5.7
U-6 Total full-time jobseekers plus 1/2 part-time jobseekers plus 1/2 total on part time for economic reasons as a percent of the civilian labor force less 1/2 of the part-time labor force	9.2	9.0	8.5	8.2	8.1	8.0	8.0	8.0
U-7 Total full-time jobseekers plus 1/2 part-time jobseekers plus 1/2 total on part time for economic reasons plus discouraged workers as a percent of the civilian labor force plus discouraged workers less 1/2 of the part-time labor force	10.2	9.9	9.3	9.0	8.8	N.A.	N.A.	N.A.

N.A. = not available.

Table A-6. Selected unemployment indicators, seasonally adjusted

Category	Number of unemployed persons (in thousands)			Unemployment rates[1]					
	Feb. 1987	Jan. 1988	Feb. 1988	Feb. 1987	Oct. 1987	Nov. 1987	Dec. 1987	Jan. 1988	Feb. 1988
CHARACTERISTIC									
Total, 16 years and over	7,886	7,046	6,938	6.6	6.0	5.9	5.8	5.8	5.7
Men, 16 years and over	4,374	3,847	3,707	6.6	5.9	5.8	5.7	5.8	5.6
Men, 20 years and over	3,606	3,154	3,071	5.8	5.1	5.0	4.9	5.1	4.9
Women, 16 years and over	3,512	3,200	3,231	6.6	6.1	6.0	5.9	5.9	5.9
Women, 20 years and over	2,858	2,581	2,635	5.8	5.2	5.2	5.2	5.1	5.2
Both sexes, 16 to 19 years	1,422	1,312	1,232	17.9	17.2	16.6	16.1	16.0	15.4
Married men, spouse present	1,730	1,495	1,428	4.1	3.7	3.5	3.4	3.6	3.4
Married women, spouse present	1,390	1,239	1,226	4.8	4.2	4.2	4.3	4.2	4.1
Women who maintain families	626	605	557	9.6	8.9	8.5	8.4	8.9	8.3
Full-time workers	6,397	5,603	5,549	6.2	5.6	5.5	5.4	5.4	5.3
Part-time workers	1,477	1,464	1,379	8.8	8.3	8.2	8.0	8.3	7.9
Labor force time lost[2]	—	—	—	7.5	6.8	6.8	6.6	6.8	6.6
INDUSTRY									
Nonagricultural private wage and salary workers	5,843	5,291	5,175	6.6	5.9	5.8	5.7	5.8	5.7
Goods-producing industries	2,305	2,034	1,992	8.0	7.0	6.5	6.4	7.1	6.9
Mining	114	63	66	13.0	8.3	7.0	8.0	7.7	7.8
Construction	727	762	700	11.7	11.2	10.6	10.6	12.2	11.0
Manufacturing	1,464	1,209	1,226	6.8	5.7	5.3	5.1	5.6	5.6
Durable goods	865	704	763	6.7	5.2	4.8	4.8	5.5	5.9
Nondurable goods	599	505	463	6.9	6.5	5.9	5.6	5.8	5.3
Service-producing industries	3,538	3,257	3,182	5.9	5.4	5.5	5.3	5.3	5.1
Transportation and public utilities	254	231	236	4.1	4.4	4.5	4.6	3.6	3.6
Wholesale and retail trade	1,668	1,438	1,476	7.2	6.5	6.6	6.2	6.1	6.4
Finance and service industries	1,616	1,588	1,470	5.2	4.7	4.8	4.8	4.9	4.5
Government workers	623	529	483	3.6	3.3	3.4	3.2	3.0	2.8
Agricultural wage and salary workers	202	217	191	11.0	10.6	11.1	10.9	11.5	10.2

[1] Unemployment as a percent of the civilian labor force.

[2] Aggregate hours lost by the unemployed and persons on part time for economic reasons as a percent of potentially available labor force hours.

Table A-7. Duration of unemployment

(Numbers in thousands)

Weeks of unemployment	Not seasonally adjusted			Seasonally adjusted					
	Feb. 1987	Jan. 1988	Feb. 1988	Feb. 1987	Oct. 1987	Nov. 1987	Dec. 1987	Jan. 1988	Feb. 1988
DURATION									
Less than 5 weeks	3,216	3,395	2,973	3,343	3,223	3,218	3,229	3,089	3,084
5 to 14 weeks	2,957	2,397	2,602	2,444	2,093	2,029	1,988	2,263	2,145
15 weeks and over	2,329	1,811	1,907	2,129	1,801	1,834	1,791	1,733	1,740
15 to 26 weeks	1,166	904	977	1,004	844	899	892	839	841
27 weeks and over	1,163	907	930	1,125	957	935	899	894	899
Average (mean) duration, in weeks	14.7	13.8	14.3	14.8	14.1	14.0	14.2	14.4	14.4
Median duration, in weeks	7.4	6.2	7.1	6.7	6.2	6.1	6.0	6.4	6.4
PERCENT DISTRIBUTION									
Total unemployed	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Less than 5 weeks	37.8	44.6	39.7	42.2	45.3	45.4	46.2	43.8	44.3
5 to 14 weeks	34.8	31.5	34.8	30.9	29.4	28.7	28.2	31.9	30.8
15 weeks and over	27.4	23.8	25.5	26.9	25.3	25.9	25.6	24.5	25.0
15 to 26 weeks	13.7	11.9	13.1	12.7	11.9	12.7	12.8	11.8	12.1
27 weeks and over	13.7	11.9	12.4	14.2	13.4	13.2	12.9	12.6	12.9

Table A-8. Reason for unemployment

(Numbers in thousands)

Reasons	Not seasonally adjusted			Seasonally adjusted					
	Feb. 1987	Jan. 1988	Feb. 1988	Feb. 1987	Oct. 1987	Nov. 1987	Dec. 1987	Jan. 1988	Feb. 1988
NUMBER OF UNEMPLOYED									
Job losers	4,469	3,770	3,739	3,835	3,388	3,307	3,200	3,209	3,207
On layoff	1,335	1,272	1,181	1,001	944	878	856	889	884
Other job losers	3,134	2,498	2,558	2,834	2,444	2,429	2,344	2,320	2,323
Job leavers	1,056	1,133	968	1,033	960	926	946	1,082	981
Reentrants	2,056	1,940	1,974	2,036	1,845	1,874	1,945	1,917	1,951
New entrants	918	759	782	1,007	914	865	909	865	864
PERCENT DISTRIBUTION									
Total unemployed	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Job losers	52.6	49.6	50.0	48.5	47.7	46.8	45.7	45.2	45.9
On layoff	15.7	16.7	15.8	12.7	13.3	12.4	12.2	12.5	12.7
Other job losers	36.9	32.9	34.2	35.8	34.4	34.4	33.5	32.7	33.3
Job leavers	12.4	14.9	13.2	13.1	13.5	13.1	13.5	15.3	13.8
Reentrants	24.2	25.5	26.4	25.8	26.0	28.0	27.8	27.0	27.9
New entrants	10.8	10.0	10.4	12.7	12.9	12.1	13.0	12.5	12.4
UNEMPLOYED AS A PERCENT OF THE CIVILIAN LABOR FORCE									
Job losers	3.8	3.2	3.1	3.2	2.8	2.7	2.7	2.6	2.6
Job leavers	.9	.9	.8	.9	.8	.8	.8	.9	.8
Reentrants	1.7	1.6	1.6	1.7	1.5	1.6	1.6	1.6	1.6
New entrants	.8	.6	.7	.8	.8	.7	.8	.7	.7

Table A-9. Unemployed persons by sex and age, seasonally adjusted

Sex and age	Number of unemployed persons (in thousands)			Unemployment rates[1]					
	Feb. 1987	Jan. 1988	Feb. 1988	Feb. 1987	Oct. 1987	Nov. 1987	Dec. 1987	Jan. 1988	Feb. 1988
Total, 16 years and over	7,886	7,046	6,936	6.6	6.0	5.9	5.8	5.8	5.7
16 to 24 years	3,015	2,659	2,525	13.0	11.8	11.6	11.2	11.6	11.1
16 to 19 years	1,422	1,312	1,232	17.9	17.2	16.6	16.1	16.0	15.4
16 to 17 years	672	638	580	19.8	20.4	19.2	17.8	18.7	17.4
18 to 19 years	754	669	655	16.4	14.7	14.8	14.7	14.5	13.9
20 to 24 years	1,593	1,347	1,293	10.4	8.8	8.9	8.5	9.1	8.7
25 years and over	4,879	4,393	4,416	5.1	4.6	4.5	4.5	4.5	4.5
25 to 54 years	4,421	3,866	3,926	5.5	4.8	4.7	4.8	4.7	4.7
55 years and over	463	527	499	3.1	3.1	3.4	3.2	3.5	3.3
Men, 16 years and over	4,374	3,847	3,707	6.6	5.9	5.8	5.7	5.8	5.6
16 to 24 years	1,644	1,456	1,333	13.5	12.1	12.0	11.7	12.2	11.3
16 to 19 years	768	693	636	18.5	17.4	17.2	17.2	16.4	15.6
16 to 17 years	365	348	285	20.5	20.9	20.4	19.3	19.4	16.9
18 to 19 years	408	360	354	17.1	14.8	14.8	15.3	14.9	14.7
20 to 24 years	876	763	697	10.9	9.2	9.2	8.7	9.9	9.0
25 years and over	2,747	2,391	2,390	5.1	4.5	4.4	4.4	4.4	4.3
25 to 54 years	2,456	2,070	2,095	5.4	4.8	4.6	4.6	4.5	4.5
55 years and over	300	351	305	3.4	3.1	3.5	3.2	4.0	3.4
Women, 16 years and over	3,512	3,200	3,231	6.6	6.1	6.0	5.9	5.9	5.9
16 to 24 years	1,371	1,203	1,192	12.4	11.5	11.2	10.7	10.9	10.8
16 to 19 years	654	619	596	17.1	16.9	16.0	14.8	15.6	15.1
16 to 17 years	307	290	295	19.0	19.9	17.9	16.2	17.9	18.0
18 to 19 years	346	329	301	15.7	14.6	14.7	14.1	14.1	13.1
20 to 24 years	717	584	596	9.9	8.5	8.6	8.4	8.2	8.4
25 years and over	2,132	2,002	2,026	5.1	4.7	4.7	4.7	4.6	4.7
25 to 54 years	1,965	1,826	1,831	5.5	4.9	4.9	4.9	4.9	4.9
55 years and over	163	175	194	2.7	3.1	3.2	3.3	2.8	3.1

[1] Unemployment as a percent of the civilian labor force.

Table A-10. Employment status of black and other workers

(Numbers in thousands)

Employment status	Not seasonally adjusted			Seasonally adjusted[1]					
	Feb. 1987	Jan. 1988	Feb. 1988	Feb. 1987	Oct. 1987	Nov. 1987	Dec. 1987	Jan. 1988	Feb. 1988
Civilian noninstitutional population	25,567	26,146	26,196	25,567	25,969	26,021	26,068	26,146	26,196
Civilian labor force	16,158	16,622	16,544	16,381	16,755	16,869	16,853	16,926	16,779
Participation rate	63.2	63.6	63.2	64.1	64.5	64.8	64.7	64.7	64.1
Employed	14,087	14,828	14,641	14,320	14,946	15,017	15,008	15,076	14,884
Employment-population ratio[2]	55.1	56.7	55.9	56.0	57.6	57.7	57.6	57.7	56.8
Unemployed	2,071	1,794	1,904	2,061	1,809	1,852	1,845	1,850	1,895
Unemployment rate	12.8	10.8	11.5	12.6	10.8	11.0	10.9	10.9	11.3
Not in labor force	9,409	9,524	9,652	9,186	9,214	9,152	9,215	9,220	9,417

[1] The population figures are not adjusted for seasonal variation; therefore, identical numbers appear in the unadjusted and seasonally adjusted columns.

[2] Civilian employment as a percent of the civilian noninstitutional population.

Table A-11. Occupational status of the employed and unemployed, not seasonally adjusted

(Numbers in thousands)

Occupation	Civilian employed		Unemployed		Unemployment rate	
	Feb. 1987	Feb. 1988	Feb. 1987	Feb. 1988	Feb. 1987	Feb. 1988
Total, 16 years and over[1]	109,464	112,460	8,503	7,482	7.2	6.2
Managerial and professional specialty	27,246	28,621	694	586	2.5	2.0
Executive, administrative, and managerial	12,725	13,759	360	348	2.8	2.5
Professional specialty	14,521	14,862	334	238	2.2	1.6
Technical, sales, and administrative support	34,519	35,209	1,680	1,502	4.6	4.1
Technicians and related support	3,163	3,381	135	113	4.1	3.2
Sales occupations	13,181	13,376	754	648	5.4	4.6
Administrative support, including clerical	18,175	18,453	791	741	4.2	3.9
Service occupations	14,835	15,170	1,373	1,311	8.5	8.0
Private household	917	885	71	67	7.2	7.0
Protective service	1,875	1,897	90	85	4.6	4.3
Service, except private household and protective	12,044	12,388	1,213	1,158	9.1	8.6
Precision production, craft, and repair	13,232	13,373	1,135	993	7.9	6.9
Mechanics and repairers	4,477	4,558	215	197	4.6	4.1
Construction trades	4,790	4,728	656	572	12.0	10.8
Other precision production, craft, and repair	3,965	4,086	264	223	6.2	5.2
Operators, fabricators, and laborers	16,803	17,237	2,318	1,977	12.1	10.3
Machine operators, assemblers, and inspectors	7,653	7,914	960	756	11.1	8.7
Transportation and material moving occupations	4,596	4,696	515	451	10.1	8.8
Handlers, equipment cleaners, helpers, and laborers	4,554	4,627	844	770	15.6	14.3
Construction laborers	561	684	235	254	29.5	27.1
Other handlers, equipment cleaners, helpers, and laborers	3,994	3,943	609	515	13.2	11.6
Farming, forestry, and fishing	2,828	2,849	333	299	10.5	9.5

[1] Persons with no previous work experience and those whose last job was in the Armed Forces are included in the unemployed total.

Table A-12. Employment status of male Vietnam-era veterans and nonveterans by age, not seasonally adjusted

(Numbers in thousands)

Veteran status and age	Civilian noninstitutional population		Civilian labor force							
			Total		Employed		Unemployed			
							Number		Percent of labor force	
	Feb. 1987	Feb. 1988	Feb. 1987	Feb. 1988	Feb. 1987	Feb. 1988	Feb. 1987	Feb. 1988	Feb. 1987	Feb. 1988
VIETNAM-ERA VETERANS										
Total, 30 years and over	7,804	7,877	7,189	7,243	6,809	6,881	380	362	5.3	5.0
30 to 44 years	6,275	6,033	5,986	5,724	5,660	5,433	326	291	5.4	5.1
30 to 34 years	1,007	781	943	732	863	688	80	44	8.5	6.0
35 to 39 years	2,781	2,329	2,664	2,223	2,522	2,082	142	141	5.3	6.3
40 to 44 years	2,487	2,923	2,379	2,769	2,275	2,663	104	106	4.4	3.8
45 years and over	1,529	1,844	1,203	1,519	1,149	1,448	54	71	4.5	4.7
NONVETERANS										
Total, 30 to 44 years	19,078	20,071	18,053	18,873	16,966	17,905	1,087	968	6.0	5.1
30 to 34 years	8,726	9,001	8,293	8,529	7,743	8,027	550	502	6.6	5.9
35 to 39 years	6,026	6,637	5,707	6,223	5,384	5,901	323	322	5.7	5.2
40 to 44 years	4,324	4,433	4,053	4,121	3,839	3,977	214	144	5.3	3.5

NOTE: Male Vietnam-era veterans are men who served in the Armed Forces between August 5, 1964 and May 7, 1975. Nonveterans are men who have never served in the Armed Forces; published data are limited to those 30 to 44 years of age, the group that most closely corresponds to the bulk of the Vietnam-era veteran population.

Table A-13. Employment status of the civilian population for eleven large States

(Numbers in thousands)

State and employment status	Not seasonally adjusted			Seasonally adjusted[1]					
	Feb. 1987	Jan. 1988	Feb. 1988	Feb. 1987	Oct. 1987	Nov. 1987	Dec. 1987	Jan. 1988	Feb. 1988
California									
Civilian noninstitutional population	20,359	20,787	20,824	20,359	20,678	20,714	20,751	20,787	20,824
Civilian labor force	13,535	13,924	13,975	13,593	13,784	13,912	13,950	13,981	14,032
Employed	12,628	13,145	13,164	12,745	12,984	13,172	13,221	13,267	13,279
Unemployed	907	780	812	848	800	740	729	714	753
Unemployment rate	6.7	5.6	5.8	6.2	5.8	5.3	5.2	5.1	5.4
Florida									
Civilian noninstitutional population	9,331	9,568	9,588	9,331	9,507	9,527	9,548	9,568	9,588
Civilian labor force	5,721	5,917	5,959	5,775	5,961	5,958	5,990	5,993	6,013
Employed	5,421	5,622	5,661	5,453	5,666	5,647	5,681	5,698	5,695
Unemployed	300	295	298	322	295	311	309	295	318
Unemployment rate	5.2	5.0	5.0	5.6	4.9	5.2	5.2	4.9	5.3
Illinois									
Civilian noninstitutional population	8,717	8,764	8,767	8,717	8,754	8,757	8,761	8,764	8,767
Civilian labor force	5,587	5,741	5,739	5,684	5,857	5,764	5,751	5,795	5,839
Employed	5,121	5,317	5,270	5,248	5,463	5,364	5,325	5,407	5,401
Unemployed	466	424	469	436	394	400	426	388	438
Unemployment rate	8.3	7.4	8.2	7.7	6.7	6.9	7.4	6.7	7.5
Massachusetts									
Civilian noninstitutional population	4,579	4,597	4,598	4,579	4,593	4,594	4,596	4,597	4,598
Civilian labor force	3,011	3,107	3,101	3,058	3,111	3,093	3,088	3,142	3,147
Employed	2,893	2,989	2,985	2,950	3,014	3,009	2,998	3,036	3,041
Unemployed	118	118	116	108	97	84	90	106	106
Unemployment rate	3.9	3.8	3.8	3.5	3.1	2.7	2.9	3.4	3.4
Michigan									
Civilian noninstitutional population	6,903	6,966	6,972	6,903	6,951	6,956	6,962	6,966	6,972
Civilian labor force	4,431	4,426	4,469	4,488	4,520	4,519	4,529	4,472	4,530
Employed	4,038	3,954	4,071	4,113	4,187	4,159	4,137	4,018	4,149
Unemployed	393	472	398	375	333	360	392	454	381
Unemployment rate	8.9	10.7	8.9	8.4	7.4	8.0	8.7	10.2	8.4
New Jersey									
Civilian noninstitutional population	5,985	6,024	6,027	5,985	6,015	6,018	6,021	6,024	6,027
Civilian labor force	3,910	3,965	3,970	3,931	3,985	3,994	4,005	4,037	3,991
Employed	3,722	3,786	3,810	3,767	3,825	3,847	3,848	3,884	3,856
Unemployed	188	178	161	164	160	147	157	153	136
Unemployment rate	4.8	4.5	4.0	4.2	4.0	3.7	3.9	3.8	3.4
New York									
Civilian noninstitutional population	13,741	13,768	13,769	13,741	13,765	13,766	13,767	13,768	13,769
Civilian labor force	8,376	8,523	8,426	8,454	8,476	8,553	8,512	8,524	8,505
Employed	7,911	8,096	8,054	8,029	8,066	8,112	8,127	8,120	8,172
Unemployed	466	427	372	425	410	441	385	404	333
Unemployment rate	5.6	5.0	4.4	5.0	4.8	5.2	4.5	4.7	3.9
North Carolina									
Civilian noninstitutional population	4,779	4,852	4,858	4,779	4,834	4,840	4,846	4,852	4,858
Civilian labor force	3,239	3,247	3,284	3,258	3,324	3,314	3,291	3,291	3,300
Employed	3,059	3,082	3,146	3,095	3,188	3,181	3,144	3,135	3,180
Unemployed	180	166	138	163	136	133	147	156	120
Unemployment rate	5.6	5.1	4.2	5.0	4.1	4.0	4.5	4.7	3.6
Ohio									
Civilian noninstitutional population	8,134	8,181	8,184	8,134	8,171	8,174	8,178	8,181	8,184
Civilian labor force	5,211	5,258	5,279	5,295	5,215	5,263	5,264	5,330	5,355
Employed	4,738	4,883	4,904	4,850	4,900	4,945	4,937	4,983	5,013
Unemployed	473	375	374	445	315	318	327	347	342
Unemployment rate	9.1	7.1	7.1	8.4	6.0	6.0	6.2	6.5	6.4

See footnotes at end of table.

Table A-13. Employment status of the civilian population for eleven large States—Continued

(Numbers in thousands)

State and employment status	Not seasonally adjusted[1]			Seasonally adjusted[2]					
	Feb. 1987	Jan. 1988	Feb. 1988	Feb. 1987	Oct. 1987	Nov. 1987	Dec. 1987	Jan. 1988	Feb. 1988
Pennsylvania									
Civilian noninstitutional population	9,273	9,309	9,312	9,273	9,303	9,306	9,307	9,309	9,312
Civilian labor force	5,431	5,728	5,653	5,564	5,734	5,709	5,780	5,827	5,786
Employed	5,082	5,372	5,319	5,253	5,403	5,394	5,457	5,497	5,486
Unemployed	349	356	334	311	331	315	323	330	300
Unemployment rate	6.4	6.2	5.9	5.6	5.8	5.5	5.6	5.7	5.2
Texas									
Civilian noninstitutional population	12,001	12,050	12,053	12,001	12,041	12,044	12,048	12,050	12,053
Civilian labor force	8,136	8,162	8,210	8,231	8,249	8,351	8,286	8,255	8,308
Employed	7,386	7,479	7,492	7,503	7,592	7,659	7,646	7,595	7,610
Unemployed	750	683	718	728	657	692	640	660	698
Unemployment rate	9.2	8.4	8.7	8.8	8.0	8.3	7.7	8.0	8.4

---

[1] These are the official Bureau of Labor Statistics' estimates used in the administration of Federal fund allocation programs.

[2] The population figures are not adjusted for seasonal variation; therefore, identical numbers appear in the unadjusted and the seasonally adjusted columns.

Table B-1. Employees on nonagricultural payrolls by industry

(In thousands)

Industry	Not seasonally adjusted				Seasonally adjusted					
	Feb. 1987	Dec. 1987	Jan. 1988 p	Feb. 1988 p	Feb. 1987	Oct. 1987	Nov. 1987	Dec. 1987	Jan. 1988 p	Feb. 1988 p
Total	99,792	104,373	102,348	102,924	101,150	102,983	103,285	103,612	103,786	104,317
Total private	82,587	86,835	85,110	85,332	84,215	85,795	86,072	86,341	86,533	86,996
Goods-producing	24,072	25,193	24,638	24,651	24,743	25,064	25,169	25,259	25,204	25,332
Mining	713	761	743	740	719	764	759	756	745	746
Oil and gas extraction	409.0	445.9	436.0	432.4	406	443	439	436	428	429
Construction	4,506	5,044	4,644	4,624	5,038	5,053	5,074	5,121	5,059	5,166
General building contractors	1,183.9	1,285.2	1,214.1	1,196.7	1,309	1,279	1,288	1,290	1,303	1,320
Manufacturing	18,853	19,388	19,251	19,287	18,986	19,247	19,336	19,382	19,400	19,420
Production workers	12,801	13,249	13,124	13,162	12,916	13,129	13,197	13,241	13,252	13,276
Durable goods	11,121	11,414	11,339	11,355	11,179	11,319	11,367	11,403	11,405	11,413
Production workers	7,353	7,609	7,540	7,560	7,398	7,530	7,568	7,597	7,590	7,606
Lumber and wood products	708.5	741.4	726.5	728.2	733	741	750	753	753	754
Furniture and fixtures	501.8	534.9	533.7	533.3	501	524	526	530	533	532
Stone, clay, and glass products	563.7	583.3	564.3	563.1	588	583	588	590	585	588
Primary metal industries	734.5	768.4	768.5	772.3	733	768	771	771	768	771
Blast furnaces and basic steel products	260.9	284.3	284.7	287.2	261	286	287	285	284	287
Fabricated metal products	1,411.9	1,455.1	1,447.4	1,446.9	1,419	1,438	1,446	1,451	1,453	1,454
Machinery, except electrical	2,022.4	2,089.5	2,096.1	2,101.3	2,018	2,064	2,074	2,085	2,096	2,097
Electrical and electronic equipment	2,101.4	2,131.8	2,128.3	2,123.6	2,106	2,111	2,118	2,128	2,130	2,128
Transportation equipment	2,025.9	2,034.0	2,004.0	2,011.3	2,022	2,019	2,016	2,018	2,006	2,005
Motor vehicles and equipment	859.4	845.0	816.0	822.7	859	838	835	832	822	822
Instruments and related products	693.7	701.4	701.6	701.1	695	697	701	701	703	703
Miscellaneous manufacturing	357.4	374.6	368.6	373.4	364	374	377	376	378	381
Nondurable goods	7,732	7,974	7,912	7,932	7,807	7,928	7,969	7,979	7,995	8,007
Production workers	5,448	5,640	5,584	5,602	5,518	5,599	5,629	5,644	5,662	5,670
Food and kindred products	1,572.6	1,636.4	1,608.6	1,605.2	1,630	1,635	1,645	1,645	1,662	1,663
Tobacco manufactures	57.7	58.0	57.9	54.8	58	55	56	56	56	55
Textile mill products	718.3	739.5	733.6	734.3	722	736	738	739	737	738
Apparel and other textile products	1,103.1	1,119.5	1,106.5	1,116.4	1,101	1,123	1,120	1,121	1,115	1,114
Paper and allied products	673.7	681.2	678.0	677.1	679	678	680	681	681	682
Printing and publishing	1,483.0	1,532.6	1,529.5	1,537.2	1,483	1,514	1,522	1,525	1,531	1,537
Chemicals and allied products	1,014.3	1,044.0	1,041.6	1,046.4	1,018	1,035	1,041	1,047	1,048	1,051
Petroleum and coal products	160.7	164.4	163.4	164.2	164	167	167	167	167	166
Rubber and miscellaneous plastics products	803.4	845.0	842.1	845.1	805	833	848	845	845	848
Leather and leather products	145.0	153.9	151.2	151.6	147	152	152	153	153	153
Service-producing	75,720	79,180	77,710	78,273	76,407	77,919	78,116	78,353	78,582	78,985
Transportation and public utilities	5,252	5,510	5,426	5,431	5,315	5,436	5,459	5,473	5,486	5,497
Transportation	3,045	3,273	3,196	3,202	3,097	3,198	3,218	3,233	3,245	3,257
Communication and public utilities	2,207	2,238	2,230	2,229	2,218	2,238	2,241	2,240	2,241	2,240
Wholesale trade	5,707	5,878	5,846	5,853	5,757	5,831	5,851	5,871	5,887	5,903
Durable goods	3,370	3,473	3,465	3,473	3,391	3,444	3,456	3,473	3,482	3,494
Nondurable goods	2,337	2,405	2,381	2,380	2,366	2,387	2,395	2,398	2,405	2,409
Retail trade	17,644	19,086	18,349	18,233	18,140	18,400	18,443	18,458	18,628	18,739
General merchandise stores	2,290.4	2,756.0	2,355.9	2,455.7	2,373	2,459	2,454	2,453	2,501	2,545
Food stores	2,914.7	3,059.3	3,009.2	3,009.3	2,940	2,969	2,982	2,996	3,021	3,037
Automotive dealers and service stations	1,951.2	2,001.6	2,001.1	2,008.2	1,979	2,000	2,003	2,013	2,021	2,037
Eating and drinking places	5,687.2	6,009.1	5,797.5	5,823.5	5,956	6,032	6,047	6,064	6,083	6,098
Finance, insurance, and real estate	6,438	6,654	6,623	6,614	6,501	6,650	6,657	6,668	6,681	6,677
Finance	3,227	3,298	3,294	3,280	3,243	3,296	3,301	3,301	3,307	3,296
Insurance	2,013	2,080	2,080	2,090	2,016	2,068	2,069	2,082	2,084	2,092
Real estate	1,198	1,276	1,249	1,244	1,242	1,286	1,287	1,285	1,290	1,289
Services	23,474	24,514	24,238	24,550	23,759	24,414	24,493	24,612	24,647	24,848
Business services	4,893.9	5,243.2	5,162.7	5,173.9	4,984	5,196	5,195	5,217	5,216	5,269
Health services	6,728.6	7,048.5	7,073.1	7,125.6	6,740	6,987	7,023	7,063	7,087	7,147
Government	17,205	17,538	17,238	17,592	16,935	17,188	17,213	17,271	17,253	17,321
Federal	2,897	2,972	2,958	2,968	2,916	2,965	2,977	2,981	2,982	2,989
State	4,020	4,076	3,962	4,103	3,927	3,973	3,978	3,996	3,994	4,007
Local	10,288	10,490	10,318	10,521	10,092	10,250	10,258	10,294	10,277	10,325

p = preliminary

Table B-2. Average weekly hours of production or nonsupervisory workers[1] on private nonagricultural payrolls by industry

Industry	Not seasonally adjusted				Seasonally adjusted					
	Feb. 1987	Dec. 1987	Jan. 1988 p	Feb. 1988 p	Feb. 1987	Oct. 1987	Nov. 1987	Dec. 1987	Jan. 1988 p	Feb. 1988 p
Total private	34.5	34.9	34.4	34.5	34.9	34.9	34.9	34.8	34.7	34.9
Mining	42.0	42.8	42.0	41.9	(2)	(2)	(2)	(2)	(2)	(2)
Construction	36.8	37.6	36.0	36.2	(2)	(2)	(2)	(2)	(2)	(2)
Manufacturing	40.8	41.8	41.0	40.7	41.1	41.3	41.2	41.0	41.1	40.9
Overtime hours	3.5	4.2	3.8	3.6	3.6	4.0	3.9	3.8	3.9	3.8
Durable goods	41.5	42.4	41.6	41.3	41.7	41.9	41.9	41.5	41.7	41.5
Overtime hours	3.6	4.3	3.9	3.8	3.7	4.1	4.0	3.9	4.0	3.9
Lumber and wood products	40.6	40.4	39.6	40.0	41.3	40.4	40.0	40.4	40.2	40.7
Furniture and fixtures	39.5	41.0	39.2	38.9	40.2	40.0	40.0	39.9	39.6	39.6
Stone, clay, and glass products	41.7	42.2	40.9	40.9	42.0	42.6	42.5	42.5	42.0	41.9
Primary metal industries	42.7	44.2	43.5	43.3	42.6	43.7	43.7	43.6	43.5	43.2
Blast furnaces and basic steel products	42.5	44.6	43.0	44.1	42.3	44.3	44.0	44.3	44.0	43.9
Fabricated metal products	41.4	42.7	41.8	41.3	41.6	42.0	42.1	41.7	41.9	41.5
Machinery, except electrical	42.1	43.6	42.0	42.5	42.2	42.6	42.7	42.5	42.0	42.6
Electrical and electronic equipment	40.9	42.0	41.3	40.5	41.1	41.1	41.0	40.9	41.2	40.7
Transportation equipment	42.4	42.7	42.2	41.9	42.5	42.5	42.4	41.4	42.0	42.0
Motor vehicles and equipment	42.0	42.9	42.4	42.3	43.0	43.0	43.1	41.4	42.1	42.5
Instruments and related products	41.3	42.4	41.7	41.5	41.3	42.1	41.7	41.3	41.7	41.5
Miscellaneous manufacturing	39.2	39.8	38.7	38.4	(2)	(2)	(2)	(2)	(2)	(2)
Nondurable goods	39.9	40.9	40.2	39.8	40.3	40.5	40.4	40.3	40.4	40.2
Overtime hours	3.3	3.9	3.6	3.4	3.5	3.8	3.8	3.7	3.8	3.6
Food and kindred products	39.4	41.1	40.5	39.6	40.1	40.5	40.6	40.6	40.7	40.3
Tobacco manufactures	36.2	40.5	40.5	41.6	(2)	(2)	(2)	(2)	(2)	(2)
Textile mill products	41.6	42.3	41.4	41.0	42.0	41.9	41.8	41.7	41.6	41.4
Apparel and other textile products	37.1	37.6	36.7	36.7	37.4	37.4	37.1	37.2	36.9	37.0
Paper and allied products	43.0	44.1	43.5	42.6	43.3	43.7	43.5	43.2	43.6	43.1
Printing and publishing	37.8	38.7	37.7	37.6	38.1	38.0	38.0	37.9	38.0	37.9
Chemicals and allied products	42.1	43.2	42.6	42.5	42.2	42.7	42.7	42.7	42.6	42.6
Petroleum and coal products	43.4	44.3	44.1	43.6	44.0	43.5	43.6	44.3	44.4	44.3
Rubber and miscellaneous plastics products	41.5	42.5	41.9	41.4	(2)	(2)	(2)	(2)	(2)	(2)
Leather and leather products	37.2	38.5	37.6	36.7	(2)	(2)	(2)	(2)	(2)	(2)
Transportation and public utilities	39.0	39.2	38.9	38.9	39.2	39.3	39.1	39.0	39.4	39.1
Wholesale trade	37.9	38.3	38.0	37.9	38.3	38.4	38.3	38.1	38.2	38.2
Retail trade	28.7	29.3	28.3	28.6	29.3	29.3	29.2	29.0	28.9	29.2
Finance, insurance, and real estate	36.4	36.0	36.2	36.6	(2)	(2)	(2)	(2)	(2)	(2)
Services	32.4	32.4	32.5	32.7	32.6	32.5	32.6	32.4	32.7	32.9

---

[1] Data relate to production workers in mining and manufacturing; to construction workers in construction; and to nonsupervisory workers in transportation and public utilities; wholesale and retail trade; finance, insurance, and real estate; and services. These groups account for approximately four-fifths of the total employees on private nonagricultural payrolls.

[2] This series is not published seasonally adjusted since the seasonal component is small relative to the trend-cycle and/or irregular components and consequently cannot be separated with sufficient precision.

p = preliminary.

Table B-3. Average hourly and weekly earnings of production or nonsupervisory workers[1] on private nonagricultural payrolls by industry

Industry	Average hourly earnings				Average weekly earnings			
	Feb. 1987	Dec. 1987	Jan. 1988 p	Feb. 1988 p	Feb. 1987	Dec. 1987	Jan. 1988 p	Feb. 1988 p
Total private	$8.92	$9.13	$9.18	$9.17	$307.74	$310.64	$315.79	$316.37
Seasonally adjusted	8.98	9.11	9.14	9.12	309.91	315.21	317.16	318.29
Mining	12.56	12.58	12.67	12.68	527.52	535.90	532.14	527.94
Construction	12.51	12.78	12.92	12.74	460.37	480.53	465.12	461.19
Manufacturing	9.84	10.08	10.07	10.07	401.47	421.34	412.87	409.85
Durable goods	10.39	10.63	10.62	10.61	431.19	450.71	441.79	438.19
Lumber and wood products	8.31	8.45	8.52	8.53	337.39	341.30	337.39	341.20
Furniture and fixtures	7.50	7.79	7.81	7.73	299.41	319.39	306.15	300.70
Stone, clay, and glass products	10.15	10.33	10.37	10.38	423.26	435.93	424.13	424.54
Primary metal industries	11.70	12.15	12.10	12.13	503.01	527.03	526.35	525.23
Blast furnaces and basic steel products	13.59	14.03	13.92	14.07	577.58	625.74	609.70	620.49
Fabricated metal products	9.99	10.24	10.19	10.18	413.59	437.25	425.94	420.43
Machinery, except electrical	10.60	10.96	10.92	10.91	449.63	477.06	467.30	463.68
Electrical and electronic equipment	9.84	10.05	10.01	10.01	402.46	422.10	413.41	405.41
Transportation equipment	12.88	13.26	13.22	13.20	546.11	566.20	557.00	553.08
Motor vehicles and equipment	13.49	13.90	13.96	13.92	577.37	596.31	591.90	580.02
Instruments and related products	9.67	9.88	9.92	9.95	399.37	418.91	413.66	412.93
Miscellaneous manufacturing	7.68	7.91	7.96	7.89	301.06	314.02	308.05	302.90
Nondurable goods	9.00	9.30	9.32	9.31	362.29	380.37	374.66	370.54
Food and kindred products	8.91	9.05	9.06	9.05	351.05	371.96	366.93	358.38
Tobacco manufactures	13.44	13.56	14.07	14.23	486.53	549.10	569.84	591.97
Textile mill products	7.11	7.33	7.38	7.36	295.70	310.06	305.53	301.76
Apparel and other textile products	5.93	6.01	6.04	6.04	220.00	225.90	221.67	221.67
Paper and allied products	11.26	11.54	11.50	11.49	484.10	508.91	501.40	491.77
Printing and publishing	10.16	10.44	10.41	10.44	384.05	404.03	392.46	392.54
Chemicals and allied products	12.21	12.62	12.54	12.49	514.04	545.10	534.20	530.03
Petroleum and coal products	14.51	14.72	14.91	14.09	629.73	652.10	657.53	649.20
Rubber and miscellaneous plastics products	8.79	9.00	8.97	8.97	364.79	382.50	375.04	371.36
Leather and leather products	6.01	6.11	6.11	6.16	223.57	235.24	229.74	226.07
Transportation and public utilities	11.93	12.17	12.12	12.20	465.27	477.06	471.47	474.58
Wholesale trade	9.55	9.74	9.79	9.81	361.95	373.04	372.02	371.80
Retail trade	6.09	6.19	6.23	6.22	174.70	181.37	176.31	177.89
Finance, insurance, and real estate	8.75	8.87	9.01	9.05	318.50	319.32	326.16	331.23
Services	8.43	8.73	8.78	8.80	273.13	282.85	285.35	287.76

[1] See footnote 1, table B-2.

p = preliminary.

Table B-4. Hourly Earnings Index for production or nonsupervisory workers[1] on private nonagricultural payrolls by industry

(1977 = 100)

Industry	Not seasonally adjusted					Seasonally adjusted						
	Feb. 1987	Dec. 1987	Jan. 1988p	Feb. 1988p	Percent change from: Feb. 1987-Feb. 1988	Feb. 1987	Oct. 1987	Nov. 1987	Dec. 1987	Jan. 1988p	Feb. 1988p	Percent change from: Jan. 1988-Feb. 1988
Total private nonfarm:												
Current dollars	172.2	176.2	176.8	177.0	2.7	171.8	174.9	175.8	175.7	176.4	176.5	(5)
Constant (1977) dollars	95.0	94.0	94.1	N.A.	(2)	94.6	93.6	93.8	93.6	93.7	N.A.	(3)
Mining	181.7	183.7	184.8	184.5	1.5	(4)	(4)	(4)	(4)	(4)	(4)	(4)
Construction	151.8	155.5	156.7	154.7	1.9	152.4	154.7	156.6	154.4	156.8	155.3	-1.0
Manufacturing	174.0	177.3	177.6	177.7	2.1	173.7	176.3	176.6	176.9	177.0	177.4	.2
Transportation and public utilities	175.0	178.6	177.8	178.9	2.2	174.3	176.9	177.1	177.4	177.4	178.1	.4
Wholesale trade	176.0	179.7	180.3	180.6	2.7	(4)	(4)	(4)	(4)	(4)	(4)	(4)
Retail trade	159.4	162.5	162.8	162.9	2.1	158.9	162.2	162.3	162.7	162.8	162.3	-.3
Finance, insurance, and real estate	187.8	193.9	193.3	194.7	3.7	(4)	(4)	(4)	(4)	(4)	(4)	(4)
Services	179.6	186.2	187.2	187.5	4.4	179.4	183.9	185.2	185.1	185.3	186.2	(5)

1 See footnote 1, table B-2.
2 Change is -1.0 percent from January 1987 to January 1988, the latest month available.
3 Change is less than .05 percent from December 1987 to January 1988, the latest month available.
4 These series are not seasonally adjusted since the seasonal component is small relative to the trend-cycle and/or irregular components and consequently cannot be separated with sufficient precision.
5 Change is less than .05 percent.
N.A. Data not available.
p = preliminary.

Table B-5. Indexes of aggregate weekly hours of production or nonsupervisory workers[1] on private nonagricultural payrolls by industry

(1977 = 100)

Industry	Not seasonally adjusted				Seasonally adjusted					
	Feb. 1987	Dec. 1987	Jan. 1988 p	Feb. 1988 p	Feb. 1987	Oct. 1987	Nov. 1987	Dec. 1987	Jan. 1988 p	Feb. 1988 p
Total	115.8	123.5	118.9	119.3	119.7	121.9	122.2	121.8	122.3	123.2
Goods-producing	94.7	102.4	97.2	96.8	99.3	101.3	101.4	101.6	100.5	101.3
Mining	78.7	87.7	83.3	82.6	79.9	87.7	86.4	85.8	82.4	83.6
Construction	114.7	133.6	115.0	115.3	136.2	136.8	138.1	138.5	138.5	136.7
Manufacturing	91.6	97.1	94.4	93.9	93.1	95.0	95.4	95.2	95.6	95.3
Durable goods	89.5	94.8	92.1	91.6	90.6	92.6	93.0	92.6	92.9	92.7
Lumber and wood products	97.6	102.0	97.5	99.0	103.3	101.7	104.2	103.7	102.8	104.6
Furniture and fixtures	106.4	118.2	112.8	111.6	107.9	112.7	113.3	113.5	113.4	113.6
Stone, clay, and glass products	81.8	86.7	80.7	80.7	88.3	87.7	88.1	88.7	86.7	86.9
Primary metal industries	61.4	67.7	65.7	66.8	61.2	66.0	67.3	67.1	66.6	66.5
Blast furnaces and basic steel products	47.0	55.2	54.5	55.4	46.0	54.9	55.0	55.1	54.8	55.6
Fabricated metal products	88.0	94.2	91.5	90.5	89.1	91.3	92.2	91.7	92.3	91.6
Machinery, except electrical	85.3	92.6	91.5	91.4	85.1	89.3	90.1	90.1	91.3	91.1
Electrical and electronic equipment	100.3	105.8	103.7	101.7	100.8	102.0	102.8	102.7	103.3	102.1
Transportation equipment	99.2	99.4	96.2	95.9	98.9	97.0	97.3	94.9	95.6	95.5
Motor vehicles and equipment	88.7	87.8	83.2	83.5	89.0	86.9	86.7	83.0	83.2	83.0
Instruments and related products	101.8	106.6	105.0	104.5	102.0	105.1	106.6	103.6	105.2	104.7
Miscellaneous manufacturing	78.3	83.4	79.1	79.8	81.1	82.7	82.5	82.0	82.4	82.8
Nondurable goods	94.6	100.5	97.8	97.1	96.7	98.7	99.0	99.2	99.5	99.2
Food and kindred products	93.1	102.1	98.1	95.7	99.3	100.3	101.4	101.4	103.0	102.2
Tobacco manufactures	73.5	83.6	81.6	75.4	76.0	73.8	75.4	78.5	79.6	77.3
Textile mill products	81.2	84.9	82.4	81.8	82.3	83.7	83.8	83.6	83.1	83.1
Apparel and other textile products	85.6	88.0	85.0	85.8	86.1	87.8	87.6	87.3	86.4	86.3
Paper and allied products	99.1	102.7	101.1	99.2	100.6	101.3	101.8	100.5	101.7	100.7
Printing and publishing	128.9	136.9	133.1	133.9	130.2	132.3	133.8	133.1	134.5	135.1
Chemicals and allied products	92.9	98.6	96.9	97.5	93.4	96.3	97.0	97.8	97.6	97.9
Petroleum and coal products	79.4	84.6	83.9	83.6	83.1	84.5	83.9	86.9	87.1	87.5
Rubber and miscellaneous plastics products	113.1	122.0	119.8	119.1	113.5	118.4	119.3	119.8	120.1	119.3
Leather and leather products	56.1	61.2	58.7	57.3	57.8	61.1	60.2	60.2	60.0	58.9
Service-producing	127.4	135.1	130.9	131.8	131.0	133.3	133.6	133.8	134.3	135.3
Transportation and public utilities	105.8	112.0	109.4	106.2	107.8	110.9	110.7	110.5	112.0	108.0
Wholesale trade	115.1	119.0	117.8	117.8	117.4	118.8	119.0	118.8	119.5	119.8
Retail trade	114.5	126.9	117.3	117.5	120.4	121.9	121.6	120.1	121.6	123.5
Finance, insurance, and real estate	139.3	141.5	141.3	142.1	141.0	142.2	142.9	141.1	142.7	143.7
Services	147.1	153.9	151.9	155.2	150.1	153.5	154.6	154.5	156.0	158.2

[1] See footnote 1, table B-2.

p = preliminary.

Table B-6. Indexes of diffusion: Percent of industries in which employment[1] increased

Time span	Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Over 1-month span	1986	53.2	48.1	40.1	33.5	52.4	46.8	52.4	56.2	55.1	53.2	59.7	59.7
	1987	53.5	56.8	58.6	50.4	58.6	55.7	68.6	54.6	65.4	65.4	71.9	63.2
	1988	p57.6	p59.7										
Over 3-month span	1986	49.7	44.9	45.7	48.4	47.6	45.4	48.4	55.1	55.9	58.1	58.4	60.3
	1987	58.6	59.5	61.1	61.6	61.4	67.3	66.2	75.1	69.7	77.8	75.9	p70.0
	1988	p65.9											
Over 6-month span	1986	47.6	47.6	43.0	43.2	45.4	48.4	47.3	53.0	59.2	58.9	57.8	58.9
	1987	61.9	62.7	58.9	67.3	67.6	71.1	76.2	78.6	80.3	p74.9	p76.5	
	1988												
Over 12-month span	1986	43.2	44.1	46.2	45.7	47.0	49.5	49.5	51.6	54.9	52.2	55.1	56.5
	1987	62.2	63.5	67.3	68.9	73.0	72.4	p76.2	p76.5				
	1988												

[1] Number of employees, seasonally adjusted for 1, 3, and 6 month spans, on payrolls of 185 private nonagricultural industries. Data for the 12-month span are unadjusted.

p = preliminary.

NOTE: Figures are the percent of industries with employment rising. (Half of the unchanged components are counted as rising.) Data are centered within the spans.

Senator SARBANES. Well, Commissioner, we thank you very much for your testimony.

I want to address the issue I mentioned in my opening statement. I think the relevant release is the one that you put out on Friday, February 26, of real earnings in January 1988.

Could we go back to table 3 of that release? I'm trying to understand what it shows us at the bottom, where it shows average weekly earnings and does it then by years, 1983 through 1987. I take it these are earnings adjusted for inflation, is that right?

Mrs. NORWOOD. Yes, they are in constant dollars.

Senator SARBANES. And what it shows is that the average weekly earnings has been dropping. Is that correct?

Mrs. NORWOOD. That's correct, in real terms.

Senator SARBANES. In other words, people are, in effect, earning less in real terms than they were in the previous years?

Mrs. NORWOOD. On average, over the past year.

Senator SARBANES. Pardon.

Mrs. NORWOOD. Yes, on average, over the past year.

Senator SARBANES. What is the historical lesson on this phenomenon? Is this an unusual development in the post-World War II period, for example?

Mrs. NORWOOD. The series tends to move in cycles. Obviously it's affected by recessions. But generally, during the 1970's, there were very large increases, particularly in the unionized sector and in manufacturing.

We now have had a considerable restructuring of industry. We also have had a change in the demographic composition of the population. Minorities are an increasing proportion of the work force, but the really big difference I think is the age cohort effect. We have a lot of baby boom generation young people who are now progressing through the labor market, and so there is a much larger supply of people, a little over 25, who are vying for jobs.

On the structural side, one of the interesting points is that while it is true that the growth of jobs has been in the service-producing sector where average earnings have tended to be somewhat lower, our employment cost index shows that over the past year the rate of increase of compensation—that is fringe benefits and earnings, wages and salaries—is going up in the services industry at a rate of close to 5 percent whereas in manufacturing the increase now is only about 3 percent. So there is the beginning of this turnaround in the wage structure that I think is quite important for the future.

But you're quite right that real earnings have declined since 1984.

Senator SARBANES. This is a matter of some concern. We've focused on it a little bit, and I'm handing you a chart—which is this chart [indicating]—and I want to make sure I understand what the report encompasses.

This is real earnings of nonsupervisory workers, showing the percent change from the 1980 level. As I understand the figures, real earnings in every year except one have been lower by these percentage amounts than they were in 1980. Do I understand your release correctly? In other words, in 1987, real earnings were 2 percent less than they were in 1980. The only year in which real earnings went up over 1980, so that people were actually better off than in 1980, was in 1984, when it went up 0.2 of a point. Am I reading the figures correctly?

Mrs. NORWOOD. I believe so. I'd like to look at them more specifically. That's the general trend. The general trend has been that earnings have not completely kept up with inflation. I prefer to use the employment cost index and to include compensation rather than the average earnings that are in that release. That series shows a general upward trend since 1980, even after adjustment for inflation.

Senator SARBANES. But the inflation figures, at least for some of these years, have not been high.

Mrs. NORWOOD. There has been inflation but it has not been as high as we had in 1979 and 1980.

Senator SARBANES. Which means that the earnings have really been held down at very low levels.

Mrs. NORWOOD. Of course we had 2 years of very steep recession.

Senator SARBANES. Well, that's here [indicating]. What accounts for the decline in real earnings in a nonrecession period, which would be these 3 years out here?

Mrs. NORWOOD. Well, as I've indicated, I think that there are probably three major factors. One is the age cohort effect. The second is the restructuring of industry effect, and the third is the problem that we are seeing in the unemployment data for the black population, although they have improved considerably over this past year.

Senator SARBANES. We had that latter problem, at least, in earlier periods. Let me ask this question. Has there been a period in the series of years in the postwar period when we've had a comparable experience in terms of a decline in real earnings?

Mrs. NORWOOD. I don't know.

Senator SARBANES. I have 7 years here and in 6 of the 7 years, using 1980 as the base year, there was a decline in real earnings.

Mrs. NORWOOD. In the late 1970's, there were very large wage increases that were partly the effect of cost-of-living adjustment clauses in many major collective bargaining contracts which helped to protect against the very large rates of inflation that we were having.

Senator SARBANES. Thank you very much, Commissioner.

Senator Roth.

Senator ROTH. Isn't it accurate that in 1980 real median family income decreased by over $1,600?

Mrs. NORWOOD. I don't have those data with me. I'll take your word for it.

Senator ROTH. Then let me ask you this. In the course of this recent expansion, is it accurate that real median family income has grown by 10.7 percent?

Mrs. NORWOOD. Again, I'd have to look at the data, but I would expect that during an expansionary period there would be at least some increase in family income. Now one of the reasons for the increase in family income is because so many more members of the family are working. So we would expect that.

Senator ROTH. That's right.

Mrs. NORWOOD. Per capita, income has been going up. In fact, there's been a lot of work done and a lot more I believe needs to be done on the whole question of the changes in income over the last 20 years. There are some puzzles there that I think we really don't quite understand. There seems to have been very little shift in family income. Now we've had a lot of changes in family structure. We have a lot more women maintaining families. We have many teenagers who went into the work force at lower wages. But I think that deserves a good deal of further study.

Senator ROTH. Mrs. Norwood, there's been a lot of talk about the new jobs being low-paid jobs. I notice that there was an article in the Washington Post on February 7 which I would ask be included as part of the record. This article points out "Now the Good News: The Middle Class Lives." This story, which is based on a critique of a Joint Economic Committee study, says that, "Fortunately, however, the generalizations that the stories seem to point to are wrong. For the economy as a whole, the average worker's pay has gradually increased and the share of the work force but low earnings gradually declined."

Are you familiar with this article?

Mrs. NORWOOD. I believe I have read it.

[The article referred to follows:]

Now the Good News: The Middle Class Lives

Low-Wage Service Jobs Haven't Really Taken Over

By Marvin H. Kosters and Murray N. Ross

THE NOTION that America is losing its middle-class jobs has been so widely popularised that it is rapidly becoming conventional wisdom. Stories frequently appear in national newspapers and magazines with headlines like "The Disappearing Middle Class" or "A Low-Wage Explosion," while local news stories tell of the family breadwinner who lost his factory job and now finds himself responding to "help wanted" signs in fast-food restaurants.

The stories about individual workers are unfortunately true. Many workers have lost what they regarded as stable jobs and have experienced considerable distress when they were unable to find jobs that paid comparable wages. Fortunately, however, the generalizations that the stories seem to point to are wrong. For the economy as a whole, the average worker's pay has gradually increased and the share of the work force with low earnings has gradually declined.

Why has the view that jobs have increasingly slipped from middle-class to low-wage status become so popular? One reason is the intuitive appeal of explanations linked to the growth of jobs in services. Average hourly wages in services are, in fact, considerably lower than average wages in manufacturing. Moreover, the huge rise in employment—over 50 percent during the past 20 years—is almost entirely accounted for by jobs outside manufacturing. And it is also true that average wages, after adjusting for inflation, stopped growing after 1972 whereas real wage growth had averaged more than 2 percent a year over the '50s and '60s.

Putting these facts together it's easy to conclude that the fast growth in service jobs has caused average real wages to stagnate and the share of workers with low wages to expand at the expense of the middle class. Easy, but wrong.

The slowdown in wage growth since the early '70s is associated with lower productivity gains dating from the same period—a legitimate area of concern. But our calculations show that virtually none of that slowdown is linked to the shift to services that has been going on for 40 years.

Moreover, part of the stagnation in wages is more apparent than real. For example, much recent growth in compensation has come in the form of better "fringe" benefits such as health and pension plans. Counting non-wage benefits would jack up real wage growth by a substantial seven-tenths of a percent a year. Overcounting inflation (specifically housing costs in the Consumer Price Index) also makes real wage gains seem smaller than they actually were.

Correcting for these factors still leads to the conclusion that overall wage increases have slowed down considerably. But that slowdown has not come from an increase in poorly paid jobs as alleged in such widely publicized studies as that released by the Joint Economic Committee in December 1986.

That study, entitled "The Great American Job Machine: The Proliferation of Low Wage Employment in the U.S. Economy," assigned wage and salary workers to high-, medium- and low-earnings categories based on their annual earnings in 1973, 1979 and 1984, adjusted for inflation. The central conclusion of the study is that the share of employment in the "low-wage" category increased disproportionately between 1979 and 1984, compared with the change between 1973 and 1979. According to the authors, "nearly three fifths of the net new employment generated between 1979 and 1984 was low-wage, compared with less than one fifth during the preceding period." [See chart.]

Our re-examination of data from the same basic source (the Current Population Survey) points to radically different conclusions. Instead of a substantial increase, our analysis shows a decline in the share of new jobs with low annual earnings. The share of new jobs that paid less than 50 percent of median earnings declined from 24 percent between 1973 and 1979 to 13 percent between 1979 and 1986.

It is also important to note that most of the workers with low annual earnings worked only part-time or part of the year—92.5 percent in 1985. In other words, the main reason for low annual earnings is not low wages but low working hours.

The middle group of jobs did have proportionately smaller gains than in the earlier period but only because the share of higher paying jobs increased substantially.

A substantial part of the difference in our results comes from updating our analysis from 1984 to 1986 (and also using a better inflation measure). But adjusting for these technical differences does not affect our central finding: The share of jobs with low earnings has generally been declining since 1967.

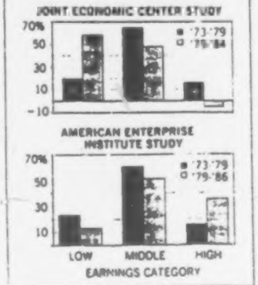
The changing skills and work experience of the labor force, especially the massive influx of young, entry-level workers during the past 20 years, have changed earnings distributions for some broad groups of workers. Earnings relationships have adjusted to accommodate the changing mix of workers as jobs were tailored to their qualifications and goals. Despite these compositional changes, however, the distribution of earnings for the work force as a whole has remained essentially unchanged.

Proponents of the view that job quality has very seriously deteriorated have argued that various policies should be considered to counter these adverse trends. Policies suggested include increased public works spending, raising the federal minimum wage, enacting plant-closing legislation and imposing protectionist trade barriers. The case for such policies, however, receives no support from careful analysis of trends in the distribution of earnings.

Marvin Kosters is director of economic policy studies and Murray Ross is a research associate at the American Enterprise Institute.

WHERE THE NEW JOBS ARE

DISTRIBUTION OF NEW JOBS BY EARNINGS CATEGORY, IN PERCENT



Article from:
The Washington Post
Sunday
February 7, 1988

Senator ROTH. Is it a fair statement to say that the low-wage service jobs really haven't taken over, that the jobs being created are in the average or above average?

Mrs. NORWOOD. There have been a number of articles on this issue and there have been several studies. In fact, there is a review of the literature on this subject in the Federal Reserve Bank of Boston's most recent bulletin that pulls all of these studies together.

There is considerable disagreement about what is happening out there. The research results depend upon how the work is done, particularly which years are picked out for the analysis. If you focus on the recovery period, you get one answer. If you focus on a period that includes a very steep recession, you may get another answer. That's one issue.

Another issue is the measure that is used for deflation. We did have, as you know, some problems with the measurement of home ownership in the Consumer Price Index in the 1970's. The work that has been done by Kosters and Ross suggests that when they account for many of these issues that there has been very little shift in the composition jobs. That is, that they conclude that there has not been an increase in the low-wage jobs. So you're quite right about that.

But I think the interesting thing about their study is that they conclude that there has been no shift in the distribution of levels in real terms of income over that period. That's the issue that I was describing before that I think needs a lot more work.

Senator ROTH. What have been the fastest growing occupations in this expansion?

Mrs. NORWOOD. They have clearly been occupations which require education and training. They have been in the service-producing industries. Probably one of the fastest growing has been business services. Something like one in eight new jobs has been in business services. Many of those jobs are fairly high-paying jobs.

We also have had a big increase in eating and drinking places and those jobs are not very good jobs if we look at them in terms of pay. They often hire young people, who are gaining experience. I think they are beginning now to move toward using more retirees.

Senator ROTH. We have a vote. I'll just ask one more question, Mr. Chairman, at this stage.

Mrs. NORWOOD. But you're quite right that the managers and professionals have been the fastest growing.

Senator ROTH. The U.S. civilian unemployment rate is 5.7 percent. How does that compare to the European industrial nations such as France, Germany, and the United Kingdom?

Mrs. NORWOOD. It's considerably lower. We have done much better. The rate for Canada is about 8 percent; for France, it's 10.6; Germany has a rate of 7 percent; and the U.K. has a measured rate of about 9 percent. Only Sweden, of the countries that we compare and adjust to our concept, has a lower unemployment rate.

Senator ROTH. On that point, how many jobs have been created since 1974 and how does this compare with Western Europe?

Mrs. NORWOOD. Since 1974, we can calculate that for you. I can tell you the one calculation that I have already made is that there were more than 15 million jobs created since the end of the recession in November 1982, and Mr. Bregger is going to be calculating the change since 1974.

Mr. **Bregger**. It's roughly 25.5 million, on average, between 1974 and 1987.

Senator **Roth**. And how does that compare with Western Europe?

Mrs. **Norwood**. Well, Western Europe is having a great deal of difficulty. They are creating very few, if any, jobs. They have very high rates of youth unemployment and they have done somewhat better than we have in productivity increases, in part because they have not employed many of their young people. But their job creation experience has been very poor.

Senator **Roth**. Thank you, Mr. Chairman.

Senator **Sarbanes**. Thank you, Senator Roth.

We're going to go vote and I'll let Congressman Solarz chair. Let me just ask two quick followup questions to the ones Senator Roth put.

Are the unemployment rate figures that you're giving us for the European countries comparable figures?

Mrs. **Norwood**. Yes. They've been adjusted to U.S. concepts, to the extent possible. But I should point out that that's using available data. Many of them—for example, the British use a registration system and we adjust it with an annual household survey.

Senator **Sarbanes**. And I take it the unemployment rates in the Pacific Rim countries are much lower, are they not?

Mrs. **Norwood**. Yes, generally.

Senator **Sarbanes**. In fact, lower than ours?

Mrs. **Norwood**. Well, we have not adjusted all of them to U.S. concepts but the rates of unemployment in many of the Pacific Rim countries seem to be lower than ours.

Senator **Sarbanes**. Which only underscores that that may be where we need to look in terms of the economic competition we're facing.

Mrs. **Norwood**. Well, I'd be a little careful about that. If we were to include discouraged workers in our definition and include them in the Japanese definition, we would have unemployment rates more comparable to the Japanese.

Senator **Sarbanes**. The other point I'd make, since you singled Sweden out as the exception to the European rule, is again to underscore the symposium which the JEC and the Congressional Research Service held about a week ago on the Swedish economy. Its purpose was partly to recognize the Year of New Sweden in the United States and the first Swedish settlement 350 years ago. But we spent a very instructive morning looking at Sweden's approach to this situation, and I'm sure those papers when they're published will be I think of great interest to people.

Mrs. **Norwood**. It was a very stimulating morning.

Senator **Sarbanes**. Congressman Solarz.

Representative **Solarz** [presiding]. Thank you very much, Mr. Chairman.

Mrs. Norwood, as the unemployment rate has gone down, has there been a commensurate decline in the poverty rate in the country, in the number of people who are considered below the proverty level, both absolutely and as a percentage of the population?

Mr. **Bregger**. I think the proportion of people in poverty is down. The most recent figures we have would be for 1986, the annual income figures. We wouldn't have anything for 1987 yet. So I don't know what the current situation is.

Mrs. **Norwood**. They have gone up, though, since the 1970's.

Representative **Solarz**. As of 1986, generally speaking, does the poverty rate parallel the unemployment rate?

Mrs. **Norwood**. Well, not entirely. And that's partly because of the concept of unemployment. People have to have been looking for work in order to be counted as unemployed with our definitions. It's an activity definition. A lot of people in poverty are not looking for work. So unemployment is not a very complete indication of the extent of economic hardship.

Representative **Solarz**. Well, do you know what the poverty rate was as of 1986?

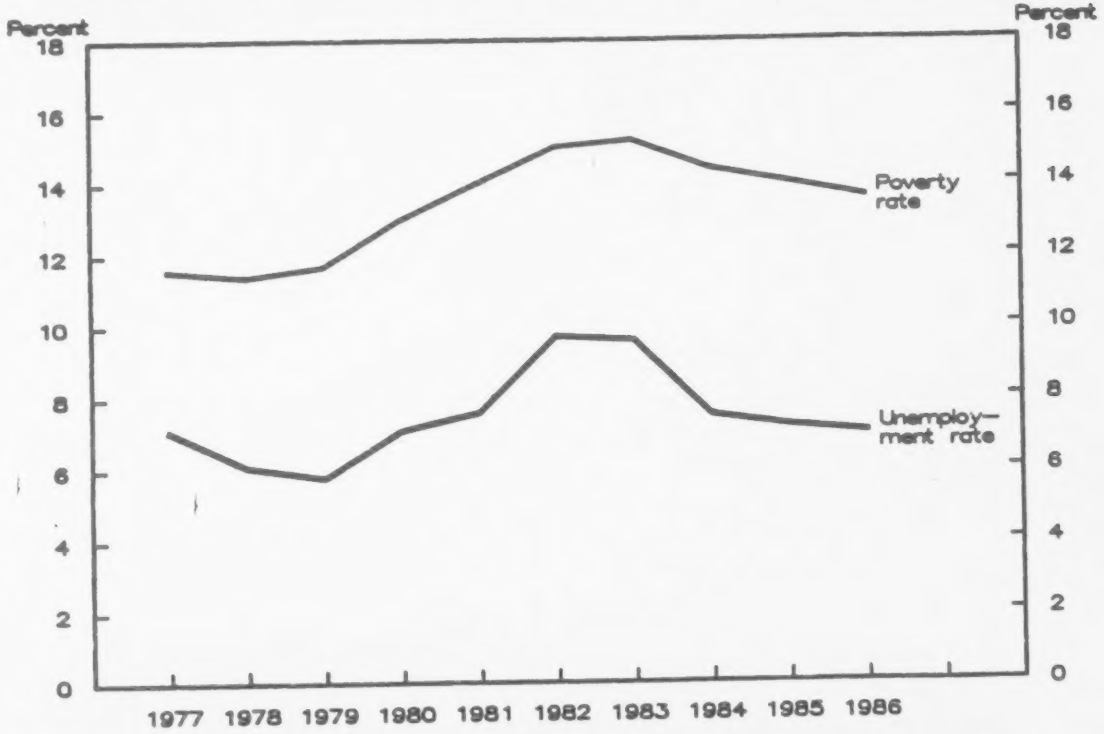
Mrs. **Norwood**. No, I don't. We can check that.

Representative **Solarz**. Could you give me a chart going back to 1977 indicating for each year that the figures were available what the unemployment rate was and what the poverty rate was?

Mrs. **Norwood**. Sure. I might also raise some questions about the definition of poverty. It is a definition that was established many years ago and was I think rather innovative and quite brilliant, but it is basically three times food expenditures and OMB has never been able to improve it.

[The following information was subsequently supplied for the record:]

Annual average unemployment rate and poverty rate, 1977–86



Note: Unemployment rate = percent of civilian labor force that is unemployed.
Poverty rate = percent of total population with income below poverty thresholds.
Source: Bureau of Labor Statistics

Representative **Solarz**. I read somewhere recently that while the number of jobs in our export industries have declined, our actual exports are up. The explanation that was offered was that this was due to technological improvements which enabled manufacturers who export their goods to produce more and sell more with less labor. Therefore, the decline in jobs in export industries was not really because of the balance-of-trade deficit but rather because of the advance of technologies.

Is that more or less accurate? Do you have any figures on that?

Mrs. **Norwood**. We don't have specific figures overall on the use of technology. Certainly that is part of what has been happening, but it's not the whole story.

Representative **Solarz**. Well, is it in fact true that our actual exports have gone up while at the same time the number of jobs in these industries has declined?

Mrs. **Norwood**. We clearly have increased productivity in our manufacturing sector during the recovery period and I would guess probably especially in the manufacture of exports. Output has been fairly strong and employment, while growing, has been less strong than the output growth.

Representative **Solarz**. Do you make any calculations or is it possible to make any calculations as to how many jobs this trade deficit costs us?

Mrs. **Norwood**. No, we have not made any calculations and I don't know of any reliable way to do that. We are importing because those products are cheaper for us. If we were to produce them, changes that would be needed in the structure of our industries are things that we really cannot calculate. BLS many years ago attempted to do that work, but have stopped doing it about 10 years ago because it is not possible to come up with very effective statistically accurate work. I think policy officials do some of that and that's fine, but we can't stand behind the specific numbers.

Representative **Solarz**. We are considering, in the House Education and Labor Committee, legislation to increase the minimum wage, which was last raised in 1981 to $3.35. Since then, as a result of inflation, it has declined in value by 25 percent.

The proposal we have before us would increase the minimum wage by 50 cents next year to $3.85; by 40 cents I think the year after to $4.25; and by another 40 cents in 1991 to $4.65.

Are you in a position to give us any estimate as to the impact which such increases would have on the unemployment situation?

Mrs. **Norwood**. No, I can't give you any estimates. I can tell you that there has been a great deal of research in this area. Economists in general believe that there is a disemployment effect. Most of the work that I have seen—and we have reviewed the literature—suggests that the disemployment effect is only mostly with teenagers. The models suggest that a 10-percent increase in the minimum wage leads to about a 1-percent decline in teenage employment.

We have just received some data for 1987 on who the minimum wage workers are. A large proportion of them are young. Of those who are 25 years and over, a very large proportion of them are people with very little education, as we would expect.

Representative SOLARZ. When you say that most economists think that it does create some disemployment effect, does that——

Mrs. NORWOOD. They believe it. I used that word very carefully.

Representative SOLARZ. Well, it stands to reason that if you increase the minimum wage there will be some employers who decide it's not in their interest to continue paying people if they have to pay them more. But does that figure take into account the extra earnings of the minimum wage workers who presumably are kept on. The great majority of whom presumably therefore have more to spend and presumably, because they have more to spend, generate greater demand which in turn creates greater need for employment throughout the economy, or at least those sectors where their purchases are made? To what extent does that increased purchasing power generate a degree or amount of employment which equals or perhaps exceeds the loss of employment due to the actual increase in the minimum wage?

Mrs. NORWOOD. Most of the studies have attempted to take account of that econometrically. I don't know how successfully.

Representative SOLARZ. What you're saying is that, on balance, they feel there's a net loss in jobs but they can't prove it?

Mrs. NORWOOD. What I'm saying is that there has been a lot of work and it's not very conclusive. I wouldn't characterize it as you have.

Representative SOLARZ. OK. I was trying to paraphrase what you were saying. But if in fact it is inconclusive, then presumably if there's ever a time to raise the minimum wage, this would be a good time. Unemployment is at a low, at least in terms of the last decade or close to the last decade, and where real earnings have declined.

Mrs. NORWOOD. I leave that judgment to you.

Representative SOLARZ. Well, would you suggest a better time from an economic point of view?

Mrs. NORWOOD. I still leave that judgment to you, sir.

Representative SOLARZ. But I'm relying on you, Mrs. Norwood.

Mrs. NORWOOD. We rely on each other.

Representative SOLARZ. You indicated that there had been enormous job generation here in the United States in the last several years, whereas the number of new jobs created in Western Europe was more or less flat.

Mrs. NORWOOD. Very few.

Representative SOLARZ. What accounts for that? What was it about our economy that generated these 15 million new jobs, whereas the Europeans you say didn't generate a net increase in jobs?

Mrs. NORWOOD. Very little, if you add them together.

Well, there are a number of reasons. We have had an expansionary policy, although we have a problem with our deficit. Job growth is a normal reaction to an expansionary policy. That's one thing that has helped. Clearly the buildup in defense has had an effect on jobs.

There is also a greater flexibility in the American labor market than there is in the European labor market and I think that stands us in very good stead. There is much more movement. At any one time people are losing jobs and finding new ones. They're voluntarily leaving jobs.

In Europe, there is a rigidity in the labor market which makes it very difficult for workers to move or for employers to add to or reduce their payrolls. It takes a very long time either to get new jobs and especially for employers to let people go.

Representative **Solarz**. Well, I think my time has expired and I yield to my good friend from Wisconsin, Senator Proxmire.

Senator **Proxmire**. I want to follow up on what the distinguished Represenative from New York was talking about.

In the first place, when I came in he was talking about the effects of the minimum wage and I think he has a very, very significant point. I argued last year that it was time to increase the minimum wage, we should increase, that our historical experience has been very good with it. At the time when we first instituted the minimum wage in the 1930's we had a high level of unemployment. It never has been as high as it was the year that we introduced the minimum wage. It has declined. So there is an effect on effective demand. The people who get the minimum wage are the lowest paid workers obviously, by definition, and they spend because they have to spend what they get. They spend it on all kinds of things. There's a rapid turnover of money. So it seems to me that the argument that the employers make that unemployment will increase if the minimum wage is increased hasn't been borne out in the first place by the experience with the minimum wage from its institution, and then I tried to chart the increases in the minimum wage, and I found in the years when the real minimum wage was the highest the economy grew the most and aggregate demand was the best and so forth.

The joy of this is that it's outside the other stimulation that you referred to in the economy, which is running a deficit, living beyond our means in that sense. So I think there's a pretty strong case to be made for increasing the minimum wage from the standpoint of increasing, not adversely affecting, unemployment.

How about that?

Mrs. **Norwood**. Well, there are clearly some areas of the country, like the Northeast, where workers cannot be found to work at the minimum wage and so employers are voluntarily raising wage rates.

Senator **Proxmire**. They're saying McDonald's is paying $6 an hour or $7 an hour now.

Mrs. **Norwood**. And we have fewer young people coming into the labor force as well.

Senator **Proxmire**. But what is your view of the effects on unemployment and inflation of an increase in the minimum wage this year? What would that do?

Mrs. **Norwood**. I don't have one.

Senator **Proxmire**. You don't have a view?

Mrs. **Norwood**. No.

Senator **Proxmire**. Do your experts have a view on it?

Mrs. **Norwood**. No, we don't.

Senator **Proxmire**. Does your husband, does he have a view? He'd better not, huh? [Laughter.]

Now let me get to the other issue and that is living beyond our means. I think that Congressman Solarz has made an excellent point about that.

I guess you mentioned it yourself. You said one of the reasons why we've had a lower level of unemployment and more growth than the European countries is because of our fiscal policy, is that right?

Mrs. Norwood. Yes. Our defense buildup has created jobs and that costs money.

Senator Proxmire. Now that's part of it and I think all of us have concentrated on that and talked about it and debated it, but we've paid very little attention to the increase in household debt and the diminution of household savings and the increase in business debt, and that's very considerable. I understand between 1963 and 1980, the ratio of total net borrowings by domestic nonfinancial sector to the GNP was about 1.4 to 1. By 1985, the ratio had risen to 1.7 to 1. The latest figures available for the third quarter of 1987 showed debt to GNP ratio increasing at 1.8 to 1. I understand that business debt, which was in 1955, for instance, $2.85 for every dollar of earnings, is now $9 for every dollar of earnings, which it seems to me means we have a very vulnerable economy now.

Come the next recession, aren't there likely to be very serious insolvency problems when you have that high a level of debt both in the business and in the household sector?

Mrs. Norwood. Well, we clearly would be happier with a larger savings rate. I don't think there's any doubt about that. And I'm not as familiar as you with the debt issues of the business sector.

Senator Proxmire. Isn't it exactly the lower savings rate and the higher spending rate that has pushed the economy ahead and has given us this rate of growth and the diminution in unemployment?

Mrs. Norwood. Particularly in recent months it has been a consumer-led expansion.

Senator Proxmire. Now the budget compromise calls for $46 billion in deficit reduction in fiscal 1989. That would normally have a restrictive effect on the economy. We had a big decrease this past year and it should have a restrictive effect on the economy. It didn't seem to have, net at least. It would seem that this would tend to increase unemployment.

Now there are some economists, notably the Chairman of the Federal Reserve Board, Alan Greenspan, who's testified in the last few days, who suggested that a deficit reduction would not be restrictive at this time because the effects of reduced Federal spending would be more than offset by the effects of the resulting reduction in real interest rates.

Do you think that the $46 billion deficit cut called for in fiscal 1989 will be good or bad for the economy in terms of growth?

Mrs. Norwood. I really don't know, Senator. We certainly have a serious deficit problem. I have not read Mr. Greenspan's testimony and so I'm not sure what he was saying. I have a great deal of respect for Alan Greenspan as an economist, but I really can't comment on that.

Senator Proxmire. Well, that's a very, very important decision we have to make. It's a policy decision along with the minimum wage that Congress is going to have to make. We want the best advice we can get and all of us have great respect and admiration for your skill and your judgment. So maybe as time goes on you can think about letting us know.

Mrs. **Norwood**. Well, I hope that one of the reasons that we get along well, Senator, is because I try to restrict my comments to things that I know something about.

Senator **Proxmire**. Well, that doesn't bother us in the Congress at all. [Laughter.]

During the 1960's and 1970's, economists gradually raised their estimates of the full employment-unemployment rate from about 4 percent to about 6 percent—that is the noninflationary rate of unemployment. Recently, the CBO, I understand, reduced its estimate of the full-employment rate to 5.7 percent. Today you're telling us that we may be falling below that rate.

They suggest that the American economy is currently at full employment. What's your estimate of the full employment-unemployment rate?

We had a very interesting discussion informally before the hearing began with Congressman Solarz but we didn't put that on the record and I'd like to hear what your judgment is.

Mrs. **Norwood**. Well, I think there are really two ways to look at the full employment-unemployment rate, as the Congressman was suggesting. One is to look at a noninflationary unemployment rate—how far can you go without heating up the economy to the extent that inflation begins to take off? That's one approach.

Economists who have studied that—and that was a very big issue at the meetings of the American Economic Association last Christmas and there must have been at least 40 sessions on it, and everyone had a different answer. But they seemed to range somewhere around 5 to 7 percent, depending upon the attitudes of the people. Some, of course, were still arguing for 4 percent, but that was really the minority.

Senator **Proxmire**. That suggests we're close to the level now. You were telling me earlier and telling Congressman Solarz that you thought that the effect of the price of oil—energy prices, and other elements like that were probably more important than the unemployment rate as far as inflation is concerned.

Mrs. **Norwood**. What I was saying was that in our inflationary experience of the late 1970's it was clear that oil was tremendously important and it could be again. There is concern about the upward push from the price of imports. We don't have any real signs of runaway inflation at this point. There are a few signs I believe. Perhaps Mr. Dalton would like to comment on trends in the PPI and the CPI.

Mr. **Dalton**. I think the PPI for intermediate goods has been rising rather steadily for the past 7, 8, or 9 months, after a fairly sustained period of very small increases and I think that's something that bears watching.

Senator **Proxmire**. Let me get back to the principal message you have for us today. It seems to me that the 530,000 increase in payroll employment in February seems almost too large to believe. Over the past year, both the household and payroll surveys have shown employment increases of 3 million. That makes the February gain a little more believable. But the two surveys often get out of line for a period of time and then come back together with a figure like the February employment gain.

The February increase still seems to be at odds with all the other economic indicators. The fact that almost all the 128,000 new goods-producing jobs were in construction with little growth in manufacturing also seems at odds with other indicators which indicate that construction is not doing very well.

What's your explanation for the 530,000 increase in payroll employment? Is that consistent, in your view, with other economic indicators?

Mrs. NORWOOD. Well, let me say first that these are data for February. All the other data are for January. That's the first point.

Second, I would agree with you that 530,000 is a great deal in a single month; that is why in my statement we averaged the 2 months together. That gives you an average increase over the 2 months of 350,000, and I believe that that's pretty consistent with what we have been seeing.

Senator PROXMIRE. Are there seasonal factors here, unusual weather, for instance?

Mrs. NORWOOD. In January. Not in February. February is a month with a very slight seasonal component. The change from January to February may be slightly exaggerated, but if you average the increase since December, you get 350,000. That's not unlike the household survey, which is close to 300,000. So I think that we are seeing considerable job growth.

What we have had is a lot of discussion about a slowdown in the economy. You will recall that last month we cautioned that a single month of lower growth figures in the job market does not necessarily establish a trend and I think that's correct—it did not. So I would agree with you that 530,000 is a great deal from January to February, but I think that 350,000 on average is quite a realistic number.

Senator PROXMIRE. Well, the part that really concerns me is the housing starts were falling throughout last year, real construction spending was down 3 percent in January, 1 percent in the last year. How could the construction industry add more than 100,000 jobs in February on that basis unless it was a weather deal?

Mrs. NORWOOD. Well, partly because it had lost jobs in January. It had been somewhat weak and that may have been somewhat weather related. Employment in the construction industry has only increased by something like 100,000 or 120,000 over the year. So construction has been weak.

Senator PROXMIRE. My time is up.

Representative SOLARZ. Feel free to continue if you like. I have some questions also.

Senator PROXMIRE. Well, you go ahead and then I'll come back.

Representative SOLARZ. Let me pick up where the Senator left off. What, in your view, has been primarily responsible for the decline in housing starts?

Mrs. NORWOOD. I don't know. There are those who believe that the stock market crash had some effect on consumers' view about what debt they should undertake. There are those who believe that interest rates had an important effect on it. I just really don't know.

Representative SOLARZ. Permit me, Mrs. Norwood, to come back to the minimum wage question for a moment.

For how far back has the Bureau of Labor Statistics been keeping the kind of figures that you give us each month?

Mrs. NORWOOD. We have some series, like the Producer Price Index, which goes back a hundred years.

Representative SOLARZ. On employment?

Mrs. NORWOOD. The employment-unemployment data go back to the 1940's.

Representative SOLARZ. If it's difficult to predict what impact an increase in the minimum wage will have in the future, perhaps we can see what impact it has had in the past on unemployment rates.

Would it be possible for you to provide us, in an expeditious fashion so this Member at least could make some use of it when we mark up this legislation in the next week or so in the House, what the unemployment figures have been for the year immediately preceding and the year in which previous increases in the minimum wage took place. Then, the unemployment rate for the following year, both overall and in whatever relevant sectors of the employment pool you think it would be useful to look at?

Senator PROXMIRE. If the Congressman would yield, he's onto a very, very important element here. I tried to do that and didn't have anything like the expert and official information you can give us when I did it, but I found it was very positive in favor of increasing the minimum wage, but I think it would be very helpful to have it official.

Mrs. NORWOOD. I think it should be understood that there's no way to develop a causal relationship.

The Bureau of Labor Statistics some years ago—Tom Gavett at the Bureau—did a study of the minimum wage and I think that might be useful to provide to you. That was done a long time ago, but it was a very good study.

Senator PROXMIRE. Why can't you just bring it up to date and give the Congressman what he asked for?

Mrs. NORWOOD. We'll see what we can do. We can give you an unemployment rate and a minimum wage. All I'm saying to you is that I don't know that there is a causal relationship.

Representative SOLARZ. Well, I take your point. Nevertheless, it would be interesting——

Mrs. NORWOOD. If you would like those two numbers, we can certainly put them together.

Representative SOLARZ. As well as the report which you said you had.

I suppose it would be useful to look at the unemployment rate preceding the increase in the minimum wage, the year in which it was increased, and what it was the following year.

Mrs. NORWOOD. We'll see what we can put together.

[The following information was subsequently supplied for the record:]

Changes in the Federal minimum wage and the unemployment rate, 1938-87

Year	Federal minimum wage 1/		Unemployment rate (Annual averages)	
	Amount (Per hour)	Effective date	All civilian workers	Teenagers
1938............	$0.25	Oct. 24	19.0	N.A.
1939............	.30	Oct. 24	17.2	N.A.
1940............	--	--	14.6	N.A.
1941............	--	--	9.9	N.A.
1942............	--	--	4.7	N.A.
1943............	--	--	1.9	N.A.
1944............	--	--	1.2	N.A.
1945............	.40	Oct. 24	1.9	N.A.
1946............	--	--	3.9	N.A.
1947............	--	--	3.9	N.A.
1948............	--	--	3.8	9.2
1949*...........	--	--	5.9	13.4
1950............	.75	Jan. 25	5.3	12.2
1951............	--	--	3.3	8.2
1952............	--	--	3.0	8.5
1953*...........	--	--	2.9	7.6
1954*...........	--	--	5.5	12.6
1955............	--	--	4.4	11.0
1956............	1.00	Mar. 1	4.1	11.1
1957*...........	--	--	4.3	11.6
1958*...........	--	--	6.8	15.9
1959............	--	--	5.5	14.6
1960*...........	--	--	5.5	14.7
1961*...........	1.15	Sept. 3	6.7	16.8
1962............	--	--	5.5	14.7
1963............	1.25	Sept. 3	5.7	17.2
1964............	--	--	5.2	16.2
1965............	--	--	4.5	14.8
1966............	--	--	3.8	12.8
1967............	1.40	Feb. 1	3.8	12.9
1968............	1.60	Feb. 1	3.6	12.7
1969............	--	--	3.5	12.2
1970*...........	--	--	4.9	15.3
1971............	--	--	5.9	16.9
1972............	--	--	5.6	16.2
1973............	--	--	4.9	14.5
1974*...........	2.00	May 1	5.6	16.0
1975*...........	2.10	Jan. 1	8.5	19.9
1976............	2.30	Jan. 1	7.7	19.0
1977............	--	--	7.1	17.8
1978............	2.65	Jan. 1	6.1	16.4
1979............	2.90	Jan. 1	5.8	16.1
1980*...........	3.10	Jan. 1	7.1	17.8
1981*...........	3.35	Jan. 1	7.6	19.6
1982*...........	--	--	9.7	23.2
1983............	--	--	9.6	22.4
1984............	--	--	7.5	18.9
1985............	--	--	7.2	18.6
1986............	--	--	7.0	18.3
1987............	--	--	6.2	16.9

* = postwar recession years.

N.A.= not available.

1/ This is the principal minimum wage that applied to most workers. For workers brought under coverage of the minimum in 1961, 1966, and 1974, lower initial minimums were established. These were gradually raised to the principal minimum wage.

SOURCE: U.S. Department of Labor
Bureau of Labor Statistics
March 1988

Representative **Solarz**. To the extent that economists have studied this, over what period of time do they estimate the impact on employment is felt? In other words, if you raise the minimum wage, is the impact felt that year or one year later or does it keep working its way through the economy indefinitely?

Mrs. **Norwood**. Well, it's very difficult to tell. What economists have done is to develop econometric models and use data for many, many years to evaluate them, and we have done a survey of the literature which we could provide to you.

Representative **Solarz**. Well, I would appreciate that.

Also picking up on Senator Proxmire's inquiries about a full employment economy, what seems to be the conventional wisdom or what is your own view about the impact on inflation of, say, each incremental 1-percent decline in the unemployment rate below the level of a full-employment economy?

In other words, let's say you assume a full-employment economy is 5 percent. What is the impact on inflation if you get unemployment down to 4 percent? Is there some correlation or formula for every 1-percent decline in unemployment below full employment inflation goes up 1 percent or 5 percent or 10 percent?

Mrs. **Norwood**. I think that it's generally believed that the old Phillips curve relationship no longer holds and I believe that——

Representative **Solarz**. What is that?

Mrs. **Norwood**. That was that you could draw a curve and as the unemployment rate went one way the price curve would go the other way. But that generally no longer holds and I think that the chart on real earnings is one exhibit that perhaps shows that.

The real discussion today is, if we get to full employment in some areas, the labor market tightens--will that raise wages? And if that raises wages, will that increase inflation?

Now we don't have any evidence yet either of runaway inflation or of very large increases in wages. Unit labor costs are still declining in manufacturing.

Representative **Solarz**. But let me try to draw you out a little bit on this. It may be that it's impossible to make these calculations and nobody has bothered to do it, but from the point of view of policymakers, it strikes me that this is critically important information. It's one thing to say that further declines in unemployment could increase inflation in the abstract. It's quite another to know by how much it will increase inflation because there is a tradeoff. There are millions of people who are looking for work who can't find it. We might be willing to permit a 1-percent increase in inflation if you could provide jobs for 2 million Americans that don't now have jobs. But we might decide if there's going to be a 10 or 20 percent increase in inflation that that's too high a price to pay. So I think we need some sense of the tradeoffs here in terms of making a judgment about the acceptability of current levels of unemployment even if one assumes that they're pretty much brushing up against a full-employment economy. Because it's clearly true you could create more jobs, but if that drives up inflation, we need to know by how much.

You say there are no meaningful calculations along these lines?

Mrs. **Norwood**. I'm sure that there may be some and we will try to review the literature for you, but I can tell you there isn't any agreement, and I can't say here it is.

Representative **Solarz**. Mrs. Norwood, does your Bureau—I don't mean this facetiously but it's actually a genuine question—do you and your people sort of simply collect different opinions, or do you attempt to make judgments of your own on these matters? In other words, if there are 10 different views of economists on this, do you try to sort through it and say this makes sense to us and this doesn't, or do you just merely assemble the panoply of perspectives?

Mrs. **Norwood**. If it's an area in which we are expert and we have the indepth research to back it up, we certainly can distinguish. But, you should understand that we have a very small analytical staff. It has been cut considerably in the last 10 or 15 years. So it's very hard for us to keep up with all the things that everyone assumes we're expert on.

Representative **Solarz**. Well, I may be going to the wrong address and I don't want to belabor you for not doing things which you don't have the resources to do. Are you the right address for a Member of Congress to ask a question concerning the impact of reductions in unemployment below the level of full employment on inflation or does one go somewhere else for that?

Mrs. **Norwood**. We would not be able to provide much help and, frankly, I'm not sure that the very many people, even those who have studied it with great care, could provide a lot of help. I was quite surprised at that issue at the Economic Association's meetings.

Representative **Solarz**. Well, is that due to the intellectual bankruptcy of the profession or is it due to the fact that we've reached the point beyond which human knowledge can take us?

Mrs. **Norwood**. I think it's because somehow we approach things nowadays assuming that there is certain truth—that there is truth, and that we can find it just by looking for it. And often it is really a matter of judgment and when judgment is concerned, we believe that if it's judgment all by itself, that that's something that we at least at BLS should stay out of.

Representative **Solarz**. Now I've heard it said that while there's been a very significant number of new jobs created since 1980—I think you said 15 million——

Mrs. **Norwood**. Yes.

Representative **Solarz** [continuing]. That many of these jobs are low-wage jobs and that we have simultaneously lost, particularly in the manufacturing sector, much better paid jobs. So you have lots and lots of people who still work but who are working for much less in lowly paid service-industry jobs than they were in higher paid manufacturing jobs. Is that true? If so, how many people fall into this category?

Mrs. **Norwood**. Well, as I indicated earlier, there has been a lot of work in that subject. Barry Bluestone and Bennett Harrison did some work in which they concluded that there had been a large growth in low-paying jobs. Marvin Kosters and Murray Ross did some work in which they concluded that if anything, there was a very slight increase toward higher level jobs.

I believe that Bluestone made a very great contribution in raising the issue. As I have indicated publicly and in writing, I do not believe that he had the full answer. I think that Kosters has moved the debate forward further and what he has concluded is that there may be some differences in the experiences of men and women and also that overall there has been very little change in the distribution of earnings.

I think that the earnings distribution issue is as important as the issue of the good jobs-bad jobs.

Representative **Solarz**. Well, that would seem to me to be, if you're right, a kind of decisive refutation of the thesis. Obviously, at any given point in the economy there are always going to be some people who lose higher paid jobs and end up with lower paid jobs. That's inevitable. But if the overall distribution of jobs in paying different levels remains the same, then I don't see how you could intellectually sustain the proposition that over a period of time that the increase in jobs has come about through an increase in poorly paid jobs taking the place of an increase in highly paid jobs. The argument falls of its own weight, unless I'm missing something here.

Mrs. **Norwood**. I believe that——

Representative **Solarz**. That's what you just said, right, in effect?

Mrs. **Norwood**. What I am saying is that I have not yet been convinced by any evidence that I have seen that there has been a big shift toward low-wage jobs. That's correct.

We now have 14.7 million people who are working part time because they want to work part time—what we call the voluntary part time. When you put them in with all the others, obviously there is an effect on average earnings. So some people look at full-time year-round earnings and they get a slightly different answer. It's not something that you can just say open and shut, here it is.

Representative **Solarz**. Well, how do you deal with—maybe it's anecdotal evidence and probably more than that—with presumably these—there have been, I gather, hundreds of thousands of people who have lost jobs in the automobile industry, the steel industry, these relatively high-paid manufacturing jobs, and I have the impression that of these people many of them couldn't find other jobs and others were obligated to take jobs that did pay a lot less.

That is the fact, isn't it, that there have been many people in that category?

Mrs. **Norwood**. Yes.

Representative **Solarz**. And that's a real human tragedy, no question, for them.

Mrs. **Norwood**. It's a human tragedy any time anyone loses a job.

Representative **Solarz**. What's compensating for that? If the distribution of jobs in terms of the amount of money you earn in different jobs has remained more or less the same, where are the higher paying jobs being generated?

Mrs. **Norwood**. Many of them are in some of the services industries that are growing very fast, like banking, the credit industry, business services, computer services, which are high-paying jobs. We have lost manufacturing industry jobs at the very high-paying end, like steel and autos, but we've also lost jobs at the very lowest paying end, like apparel and textiles.

So we're losing both at the top and the bottom and we're gaining both at the top and at the bottom. The debate seems to be which is predominant. People overuse the data, in a sense.

Representative SOLARZ. Now for the kind of person who has a high-paying manufacturing job in automobiles and steel, as a practical matter, if they lose their job, is there any real possibility that they can find another job paying more or less the same amount of money?

Mrs. NORWOOD. Some of them have found jobs. In some cases, those wages in the new jobs were high, but in other cases the wages in the new jobs were not as high and they may have needed retraining in order to get the jobs that pay as much. That's one of the real problems that we need to address.

We did a survey which showed that there were a little over 5 million workers who were displaced from jobs because plants closed down or shifts were eliminated. About two-thirds of them had found jobs and more than half of those had found jobs at either the same or higher pay. That's the only information that we have on that.

Representative SOLARZ. If my friend from Wisconsin, Senator Proxmire, will permit me to ask one final question because I see my time has expired, in your study which demonstrated a decline in real earnings for nonsupervisory workers, is that decline in real earnings related in any way to the tax rate or is this just in terms of their salary?

Mrs. NORWOOD. Those data and that chart that was done by the committee staff are based upon average hourly earnings which does not include any bonuses; it does not include lump-sum payments; and it does not include fringe benefits clauses.

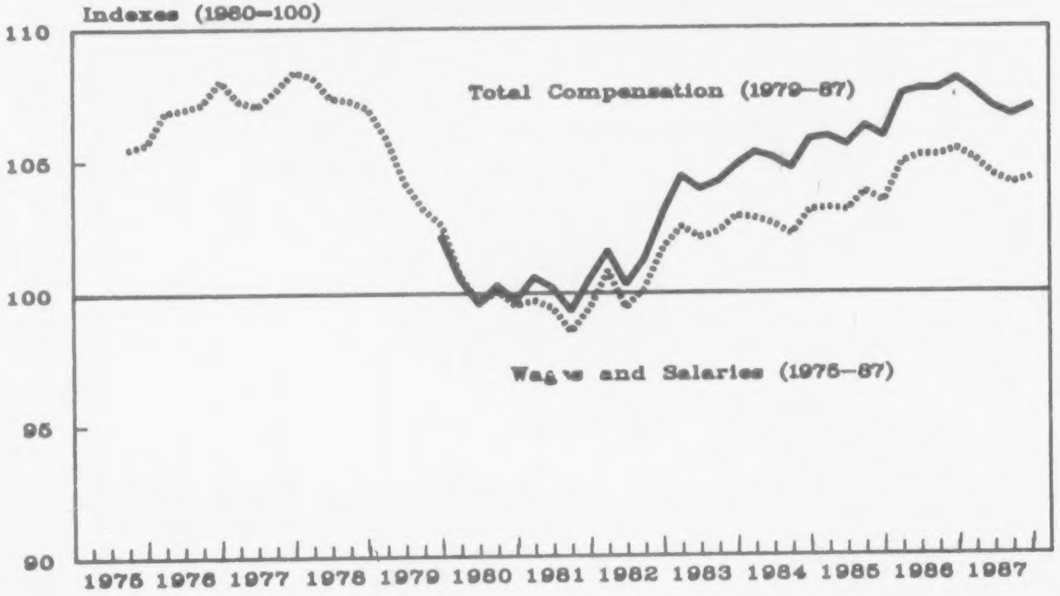
Representative SOLARZ. So after calculating in taxes, bonuses, benefits, and the like, what would it then indicate? Are people in fact worse off taking everything into account than they were back in 1981 in nonsupervisory work?

Mrs. NORWOOD. Well, for that, one would need to use the employment cost index and we can supply that for the record.

[The following information was subsequently supplied for the record:]

EMPLOYMENT COST INDEX: Private Industry

Constant-dollar indexes for total compensation and wages and salaries



Source: Bureau of Labor Statistics

Senator PROXMIRE. It would be helpful if when you did that that you made an adjustment—that you would tell us perhaps depending on the level of earnings. For instance, the change in the Tax Code that went into effect in 1987 would have a favorable effect on people with incomes that are fairly high—$65,000 and higher. People with incomes of less than $30,000, it is my understanding, will pay as much or more than they paid before.

Mrs. NORWOOD. I'm not aware of any way to do that with any accuracy.

Senator PROXMIRE. All right. But if you're going to make an adjustment for these things, let us know also what you can't make an adjustment for.

Now I'd like to ask you about two things particularly. Recent figures suggest that there has been a strong growth in exports, but manufacturing employment rose only 19,000 per month in January and February, after growing more than 60,000 per month during the second half of 1987. And average weekly hours in manufacturing also declined in February.

What accounts for that recent weakness? I thought that the manufacturing sector was speeding up. I'm startled and stunned by that.

Mrs. NORWOOD. Well, we're talking about employment, not production.

Senator PROXMIRE. I understand that, but why wouldn't that be fairly similar? Fewer people working wouldn't produce more, would they?

Mrs. NORWOOD. Not necessarily. I think that what we're seeing now is employers being much more careful about taking on additional work force. Labor costs are a very important part of their total costs and they have been working very hard to keep those costs down. We've been talking about that to some extent this morning.

Senator PROXMIRE. But certainly if there's a growth in manufacturing production, there should be a somewhat similar growth in jobs, isn't that right?

Mrs. NORWOOD. Unless labor productivity improves considerably, and as we have been seeing manufacturing has done reasonably well.

Senator PROXMIRE. Has it improved enough to make that difference between 60,000 increased jobs per month compared to 19,000? That's a tremendous change.

Mrs. NORWOOD. Well, remember, too, Senator, we were coming from a very low level. Manufacturing employment was going down for many months. When we began adding jobs, I expected that we would add more at the beginning. This is only 2 months, in any case. The growth is very moderate here and you're right, it has been much more vigorous before, but that's not unusual. It is not declining. That's the important thing.

Senator PROXMIRE. I asked you for some figures on the jobs increases since 1980, 1980 through 1987, by small business and big business and I got some very, very interesting responses. During that period there was an increase in jobs of 9.5 million. All of that increase were in firms that employed 500 or fewer people. As a matter of fact, firms that employed more than 500 people have had an actual reduction of 600,000 in the number of people that they employed in 1987 compared to the number that they employed in 1980.

Furthermore, the biggest increase were in firms that employed 50 and fewer people. More than 50 percent of that increase in jobs were in those relatively very small businesses. It seems to me that this has some implications for economic policy, particularly with respect to concentration, takeover, mergers, and so forth. When you have firms moving in and taking over small businesses, there may be a diminution in the availability of jobs, is that right?

Mrs. **Norwood**. Anything is possible, obviously. Those data are rather interesting. They are, of course, based on business establishments, not firms. So that a company, for example, might have several small plants or small stores—each establishment is not necessarily a business. But I think you're quite right that the trend——

Senator **Proxmire**. Well, I want to make sure that I understand that. Are you saying then that every McDonald's shop would be a separate establishment and be computed in the small business part of this thing?

Mrs. **Norwood**. In theory, yes.

Senator **Proxmire**. Well, that's not very helpful then. What I wanted to know was how the small firms—is there any data you can give me on that?

Mrs. **Norwood**. Not by company.

Senator **Proxmire**. Why isn't that kept?

Mrs. **Norwood**. Because our list is based upon establishments. As a matter of fact, the fiscal 1989 budget submission for the Bureau of Labor Statistics includes a proposal to undertake an effort to try to improve that list to get at that. But our list is an establishment-based list and I believe that we told that to your staff.

Senator **Proxmire**. Well, I wish I had known that. I made an absolutely wrong conclusion. I made the argument that it was small business, and I'm wrong about that. Big business may have many small establishments under one roof and you may include McDonald's, you may include that fellow in Arkansas who's worth $2 billion and he's one of the biggest retail operations in the country—all those operations would be considered small business I take it, is that right?

Mrs. **Norwood**. Yes.

Senator **Proxmire**. Or small establishments?

Mrs. **Norwood**. That's right.

Senator **Proxmire**. All right. Well, I'll be plugging away for an increase in your budget. That's the only one I'm for.

During the past 5 years, U.S. manufacturing industries have made substantial gains in productivity, as you've pointed out. Did these gains occur primarily because manufacturers closed factories with low productivity or did it occur primarily because of a widespread rise in productivity in existing factories?

Mrs. **Norwood**. Well, I believe that we have made our basic plant structure much more efficient than it had been in the recent past. For that reason, by the way, I think that we need to be very careful in how we look at the figures on capacity utilization.

I don't know whether Mr. Mark has something else to add to that.

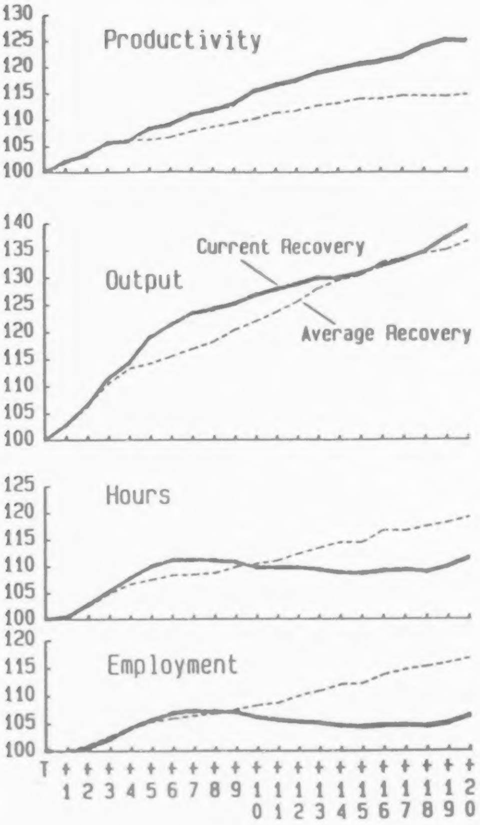
Mr. **Mark**. There may be some evidence to support the conclusion that we have had an improvement in productivity in manufacturing reflecting a reduction in the marginal firms. Output growth in this recovery in manufacturing has been consistent with the output growth in previous recoveries, but the employment growth has been substantially less. This indicates that the larger productivity gains are more associated with employment declines this time than they have been previously. This, in turn suggests that more efficient firms may be remaining and that changes are taking place in a restructuring of manufacturing.

Senator **Proxmire**. For the record, will you give me the documentation and details on that?

Mr. **Mark**. Yes.

[The following information was subsequently supplied for the record:]

Chart 1. Manufacturing productivity, output, hours, and employment in the current recovery and average recovery in the post-war period.



BUREAU of LABOR STATISTICS MARCH 1988

Table 1. Changes in productivity and related measures 20 quarters after the trough of postwar recessions.
(Percent change at compound annual rate)

Trough quarter	Productivity	Output	Hours	Employment
Manufacturing:				
1949 IV[1]............	3.8	10.7	6.6	6.1
1954 II[1]............	2.4	4.1	1.7	1.5
1958 II[1]............	3.2	8.2	4.9	3.9
1961 I..............	4.6	8.8	4.0	3.0
1970 IV[1]............	4.2	8.1	3.8	2.9
1975 I..............	2.4	5.3	2.9	2.5
1980 III[1]...........	3.1	5.6	2.5	2.1
Average cycle.......	2.8	6.5	3.6	3.1
1982 IV.............	4.6	6.9	2.2	1.3

---

[1] Data show percent change trough to peak; recovery lasted fewer than 20 quarters.

Source: Bureau of Labor Statistics
March 1988

Senator **Proxmire**. Two other quick questions. One, was the one-tenth decline in the unemployment rate statistically significant?

Mrs. **Norwood**. No.

Senator **Proxmire**. It was not?

Mrs. **Norwood**. But it was down two-tenths since November.

Senator **Proxmire**. So the decline that we had from January to February was not, but the decline from December to February was?

Mrs. **Norwood**. From November to February.

Senator **Proxmire**. The other question is, the unemployment rate for teenagers fell six-tenths of a percent in February. Is this an unusually large 1-month change and, if so, what was going on in the economy to explain the improved job situation for teenagers?

Mrs. **Norwood**. The teenage rate has to change almost 1.3 percentage points in order to be statistically significant. So we would say nothing much is happening.

Senator **Proxmire**. Very good.

Representative **Solarz**. Let me ask one final question if I might.

You suggested I gather that this impressive record of job creation—15 million jobs in the last several years—is due largely to our fiscal policy. Am I correct?

Mrs. **Norwood**. No. I said that the buildup in defense and the expansionary policy that we had, together with the flexibility of our economy, probably distinguished us from the Europeans. I believe that was the question you asked.

Representative **Solarz**. But the bottom line there, from a macroeconomic point of view, the flexibility of the economy is a constant in comparison to Europe. What changed in the last several years was that we ran enormous deficits.

Mrs. **Norwood**. Well, it's one of the things, yes.

Representative **Solarz**. OK. From your point of view, if you look at it in macroeconomic terms, supposing instead of having a very large tax cut in 1981 we had kept taxes where they were but had run deficits of exactly the same magnitude we've had for the last several years where the deficit was due to substantial increases in domestic spending or infrastructure, education, health, housing, and the like.

Would the macroeconomic impact on job creation have been more or less the same?

Mrs. **Norwood**. Well, I can't give you an answer to that offhand. One would have to go through the whole input-output framework to find out where the jobs were, what the demand was and so on. So I really don't know the answer to that.

Representative **Solarz**. Well, obviously, there might have been a change in the composition of the jobs that were created, but would most economists then say that if we had run exactly the same deficits we've run from 1981 through 1987 but had not reduced taxes and had produced those deficits through an increase exclusively in spending with a large increase in domestic spending, would the overall number of jobs created have been more or less the same?

Mrs. **Norwood**. Well, what I'm saying is that I can't tell you because I don't know, for example, whether it takes the same amount of people to construct an airplane as it does to construct a bridge.

And in addition, of course, there are the tax consumer spending issues.

Representative SOLARZ. Well, when I served on the House Budget Committee, I remember very clearly the hearings we had with Secretary Weinberger who attempted to justify the defense buildup, among other things, on the grounds that it had a positive impact on the economy. The point was made that while it did result in a net creation of jobs, that you could create even more jobs through comparable increases in domestic spending. So if the justification for it was job creation, you can get more jobs otherwise. Now in fairness to him, he wasn't justifying it on economic grounds, but on strategic, military grounds.

But isn't the conventional wisdom that you generate more jobs for the buck in domestic spending than you do in military spending?

Mrs. NORWOOD. I don't know. I just don't know.

Representative SOLARZ. Do you have any more questions, Senator Proxmire?

Senator PROXMIRE. No.

Representative SOLARZ. I think I was deputized by the chairman in his absence to serve as temporary acting chairman of the Joint Economic Committee. I was stunned by this meteoric rise to this position of power on this prestigious panel, but all good things must come to an end.

So let me thank you very much for coming. We do appreciate getting the monthly benefit of your wisdom and your associates also.

Mrs. NORWOOD. Thank you.

Representative SOLARZ. The hearing is adjourned.

[Whereupon, at 11:10 a.m., the committee adjourned, subject to the call of the Chair.]

EMPLOYMENT-UNEMPLOYMENT

FRIDAY, APRIL 1, 1988

Congress of the United States,
Joint Economic Committee,
Washington, DC.

The committee met, pursuant to notice, at 9:30 a.m., in room SD-628, Dirksen Senate Office Building, Hon. Paul S. Sarbanes (chairman of the committee) presiding.

Present: Senators Sarbanes and Proxmire.

Also present: Judith Davison, executive director; and William Buechner, Jim Klumpner, Bob McCauley, David Podoff, Dan Melnick, and Chris Frenze, professional staff members.

OPENING STATEMENT OF SENATOR SARBANES, CHAIRMAN

Senator **Sarbanes**. The committee will come to order.

This morning the Joint Economic Committee is pleased once again to welcome as our witness Janet Norwood, the Commissioner of Labor Statistics, and her colleagues, Mr. Plewes and Mr. Dalton, to receive testimony on the employment and unemployment situation for March.

In addition, Commissioner, I may raise with you some questions relating to the Bureau of Labor Statistics' statistical programs in the course of the questioning period. First, I'd like to make these observations.

Throughout the years, the Bureau of Labor Statistics and the Joint Economic Committee have worked closely together in an effort to ensure the integrity of, and strengthen, the U.S. statistical base. Both the public and the private sector depend on government data to provide the foundation for economic policy decisions as well as a wide range of business decisions.

Last year, the Office of Management and Budget proposed to truncate the questionnaire for the 1990 census and to reduce the sample size. In the opinion of many, this would have had a serious adverse effect on the quality of the census data, particularly some of the data used for BLS programs. This matter was explored by the committee at length at an August hearing.

Earlier this week, OMB responded to concerns about the proposed census cuts by announcing that it had agreed to abide by Census Bureau recommendations to restore several important housing questions to the short form and to retain questions on the cost of utilities and fuels. OMB also agreed to a household sample size that will be large enough, it is believed, to produce reliable data for the Nation as a whole and for State and local areas as well.

I might note that 30 Members of the Congress, Senators and Congressmen, both Democrats and Republicans, wrote to President Reagan about 2 weeks ago urging that the census questionnaire reflect the best professional judgment of the Census Bureau and that it not be determined by an OMB decision that did not reflect a professional judgment as to what was necessary in order to do a proper and complete 1990 census.

This decision to ensure the integrity of the 1990 census, made only a few days ago, is a welcome one. In the short run, it will provide us with the fundamental statistics needed for the final decade of this century. For the longer run, it will help assure that the traditional high quality of Federal statistical programs is maintained.

The committee will now turn to Commissioner Norwood for her analysis of the labor market statistics for March.

Senator Proxmire, do you have any opening statement?

OPENING STATEMENT OF SENATOR PROXMIRE

Senator Proxmire. Yes. I just wanted to point out a few developments here that concern me.

Certainly the overall figure of 5.5 percent unemployment in March is very encouraging primarily because it continues a steady trend in the right direction, of course, of diminishing unemployment.

However, it's interesting that you note right away in your statement that the household survey showed a seasonally adjusted decline both in the labor force and in employment and you point out at the end of your statement that factory jobs showed no increase, closing out a relatively weak first quarter for the industry.

That concerns me because of the fact that the impression that I think we're getting is that unemployment is improving. Then we look at the black unemployment for January, February, and March and find that it has increased from 12.2 percent to 12.8 percent. Hispanic unemployment has increased a full percent, from 7.2 to 8.2. We find that hours of work in March dropped both in manufacturing and overall. It didn't drop much but it dropped some.

I notice that discouraged workers, you give us a report now on the first quarter of the year—the discouraged workers rose by 115,000. That's better than a 10-percent increase in discouraged workers, which is remarkable in view of the fact that the unemployment situation seems to have improved.

The workweek for all production nonsupervisory workers on private nonagricultural payrolls decreased, fell, by 0.2 hours in March. And in dollars of constant purchasing power your statistics—not in your statement but back in the documentation you gave us—shows in dollars of constant purchasing power that real earnings decreased 1.1 percent ending in February. That puzzles me because here we have a situation in which unemployment went down by a full percentage point and under those circumstances you would think that wages would rise, but they didn't rise. They fell and they fell by 1 percentage point in spite of the fact we had falling unemployment.

Then there's one other point that interested me, and that is that the diffusion index has been steadily falling. In November it was

71.9; December, 63.2; January, 60; and now it's down in March to 55.7. That usually is an indication of diminished demand for labor and rising unemployment.

All of this, of course, is going against what you report to us as a falling level of unemployment over the year.

Thank you, Mr. Chairman.

Senator **Sarbanes**. Before you begin, Mrs. Norwood, Senator Roth has requested that his opening statement be placed in the record. Without objection, so ordered.

[The written opening statement follows:]

WRITTEN OPENING STATEMENT OF SENATOR ROTH

"This morning the Labor Department brings more good news for American workers. The longest peacetime economic expansion in U.S. history pushed the civilian unemployment rate down to a level of 5.6 percent in March. This is equal to its lowest level set in May of 1979, and it hasn't been lower than the current level since 1974.

"In addition, more than a quarter of a million new jobs were created in March, according to the survey of business payrolls. This shows that the economy continues to expand, increasing employment and income for all Americans.

"Today's employment report is no April Fools prank for American workers. Instead, the joke is on those who have, over the last five years, continually predicted economic disaster. As I've said before, while the critics have been glooming and dooming, employment has been booming."

Senator **Sarbanes**. Commissioner, we would be happy to hear from you.

STATEMENT OF HON. JANET L. NORWOOD, COMMISSIONER, BUREAU OF LABOR STATISTICS, DEPARTMENT OF LABOR, ACCOMPANIED BY THOMAS J. PLEWES, ASSOCIATE COMMISSIONER, OFFICE OF EMPLOYMENT AND UNEMPLOYMENT STATISTICS; AND KENNETH V. DALTON, ASSOCIATE COMMISSIONER, OFFICE OF PRICES AND LIVING CONDITIONS

Mrs. **Norwood**. Thank you very much, Mr. Chairman.

As always, we are very pleased to be here.

The overall unemployment rate was 5.5 percent in March, and the civilian rate was 5.6 percent. Both rates have edged down since the beginning of this year and are nearly a full percentage point below the level of a year ago.

Payroll employment, as measured by the BLS business survey, rose by 260,000 from February to March, whereas the household survey showed a seasonally adjusted decline both in the labor force and in employment. As you know, such divergences in the short term have occurred before. Over the long run, however, the two surveys generally show similar trends. On balance, over-the-month movements in the household survey tend to be more erratic than in the business survey. Short-term movements thus frequently can be better judged with data from the business survey.

The 260,000 growth in the business survey from February to March was somewhat smaller than the average monthly gains since last fall. Most of the job increase was concentrated in services and construction. The services industry rose by 85,000 to close out a strong first quarter. Construction added 80,000 jobs from February to March, with most of the improvement occurring in special trades, like masonry, roofing, and electrical contracting.

No overall job growth took place in the Nation's factories. Increases did occur in machinery and printing and publishing, but these were offset by small declines in 11 of the other industries for which data are published in our release. Indeed, March follows 2 months of slow growth in factory employment, in sharp contrast to the rather strong performance of the second half of 1987.

In March, 5.6 percent of the civilian labor force was unemployed, compared with 5.7 percent in February. Although the 0.1 percentage point change is not statistically significant by itself, this continues the downward drift in the jobless rate that has been occurring over much of the past year. Indeed, the rate is now back to the lowest level reached in 1979.

This successful experience is clearly related to our record of strong job growth. Another contributing factor has been the reduced rate of labor force expansion. As we have often discussed, the dramatic surge of women's labor force participation took place in the 1960's and the 1970's. Although women are continuing to enter the labor force in large numbers, the rate of their increase has slowed. In addition, the birth rate decline in the 1960's and early 1970's has resulted in fewer young people reaching labor force age in the 1980's. Over the past year, the labor force has increased by less than 2 million.

Our quarterly data on discouraged workers—those not in the labor force who want work but are not looking for jobs because they think none are available—show 1 million persons in that status. This number rose a bit in the first quarter after having declined during 1987. Even with this year's first quarter's data, however, a modest reduction in labor market discouragement over the year remains.

In conclusion, payroll employment continued to grow in March, and the recent declines in unemployment were sustained. Employment in services continued to increase, and construction showed very strong job growth. However, factory jobs showed no increase, closing out a relatively weak first quarter for the industry.

My colleagues and I would be happy to try to answer any questions you may have.

[The table attached to Mrs. Norwood's statement, together with the Employment Situation press release, follows:]

Unemployment rates of all civilian workers by alternative seasonal adjustment methods

Month and year	Unadjusted rate	X-11 ARIMA method						X-11 method (official method before 1980)	Range (cols. 2-8)
		Official procedure	Concurrent (as first computed)	Concurrent (revised)	Stable	Total	Residual		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
1987									
March........	6.9	6.5	6.5	6.6	6.6	6.5	6.5	6.6	.1
April........	6.2	6.3	6.3	6.3	6.4	6.3	6.3	6.3	.1
May..........	6.1	6.3	6.3	6.3	6.3	6.3	6.5	6.3	.2
June.........	6.3	6.1	6.1	6.1	6.1	6.1	6.2	6.1	.1
July.........	6.1	6.0	6.0	6.1	6.0	6.1	6.1	6.0	.1
August.......	5.8	6.0	6.0	6.0	6.0	6.1	6.1	6.0	.1
September....	5.7	5.9	5.9	5.9	6.0	5.9	5.9	5.9	.1
October......	5.7	6.0	6.0	6.0	6.0	5.9	6.0	6.0	.1
November.....	5.6	5.9	5.9	5.9	5.9	5.9	5.9	5.9	-
December.....	5.4	5.8	5.8	5.8	5.7	5.7	5.8	5.8	.1
1988									
January......	6.3	5.8	5.8	5.8	5.8	5.8	5.6	5.8	.2
February.....	6.2	5.7	5.7	5.7	5.8	5.7	5.6	5.8	.2
March........	5.9	5.6	5.6	5.6	5.7	5.6	5.5	5.6	.2

SOURCE: U.S. DEPARTMENT OF LABOR
Bureau of Labor Statistics
April 1988

(1) *Unadjusted rate*. Unemployment rate for all civilian workers, not seasonally adjusted.

(2) *Official procedure (X-11 ARIMA method)*. The published seasonally adjusted rate for all civilian workers. Each of the 3 major civilian labor force components--agricultural employment, nonagricultural employment and unemployment--for 4 age-sex groups--males and females, ages 16-19 and 20 years and over--are seasonally adjusted independently using data from January 1974 forward. The data series for each of these 12 components are extended by a year at each end of the original series using ARIMA (Auto-Regressive, Integrated, Moving Average) models chosen specifically for each series. Each extended series is then seasonally adjusted with the X-11 portion of the X-11 ARIMA program. The 4 teenage unemployment and nonagricultural employment components are adjusted with the additive adjustment model, while the other components are adjusted with the multiplicative model. The unemployment rate is computed by summing the 4 seasonally adjusted unemployment components and calculating that total as a percent of the civilian labor force total derived by summing all 12 seasonally adjusted components. All the seasonally adjusted series are revised at the end of each year. Extrapolated factors for January-June are computed at the beginning of each year; extrapolated factors for July-December are computed in the middle of the year after the June data become available. Each set of 6-month factors are published in advance, in the January and July issues, respectively, of *Employment and Earnings*.

(3) *Concurrent (as first computed, X-11 ARIMA method)*. The official procedure for computation of the rate for all civilian workers using the 12 components is followed except that extrapolated factors are not used at all. Each component is seasonally adjusted with the X-11 ARIMA program each month as the most recent data become available. Rates for each month of the current year are shown as first computed; they are revised only once each year, at the end of the year when data for the full year become available. For example, the rate for January 1984 would be based, during 1984, on the adjustment of data from the period January 1974 through January 1984.

(4) *Concurrent (revised, X-11 ARIMA method)*. The procedure used is identical to (3) above, and the rate for the current month (the last month displayed) will always be the same in the two columns. However, all previous months are subject to revision each month based on the seasonal adjustment of all the components with data through the current month.

(5) *Stable (X-11 ARIMA method)*. Each of the 12 civilian labor force components is extended using ARIMA models as in the official procedure and then run through the X-11 part of the program using the stable option. This option assumes that seasonal patterns are basically constant from year-to-year and computes final seasonal factors as unweighted averages of all the seasonal-irregular components for each month across the entire span of the period adjusted. As in the official procedure, factors are extrapolated in 6-month intervals and the series are revised at the end of each year. The procedure for computation of the rate from the seasonally adjusted components is also identical to the official procedure.

(6) *Total (X-11 ARIMA method)*. This is one alternative aggregation procedure, in which total unemployment and civilian labor force levels are extended with ARIMA models and directly adjusted with multiplicative adjustment models in the X-11 part of the program. The rate is computed by taking seasonally adjusted total unemployment as a percent of seasonally adjusted total civilian labor force. Factors are extrapolated in 6-month intervals and the series revised at the end of each year.

(7) *Residual (X-11 ARIMA method)*. This is another alternative aggregation method, in which total civilian employment and civilian labor force levels are extended using ARIMA models and then directly adjusted with multiplicative adjustment models. The seasonally adjusted unemployment level is derived by subtracting seasonally adjusted employment from seasonally adjusted labor force. The rate is then computed by taking the derived unemployment level as a percent of the labor force level. Factors are extrapolated in 6-month intervals and the series revised at the end of each year.

(8) *X-11 method (official method before 1980)*. The method for computation of the official procedure is used except that the series are not extended with ARIMA models and the factors are projected in 12-month intervals. The standard X-11 program is used to perform the seasonal adjustment.

Methods of Adjustment: The X-11 ARIMA method was developed at Statistics Canada by the Seasonal Adjustment and Times Series Staff under the direction of Estela Bee Dagum. The method is described in *The X-11 ARIMA Seasonal Adjustment Method*, by Estela Bee Dagum, Statistics Canada Catalogue No. 12-564E, February 1980.

The standard X-11 method is described in *X-11 Variant of the Census Method II Seasonal Adjustment Program*, by Julius Shiskin, Allan Young and John Musgrave (Technical Paper No. 15, Bureau of the Census, 1967).

News United States
Department
of Labor

Bureau of Labor Statistics Washington, D.C. 20212

Technical information: (202) 523-1371
523-1944
523-1959
Media Contact: 523-1913

USDL 88-156

TRANSMISSION OF MATERIAL IN THIS
RELEASE IS EMBARGOED UNTIL
8:30 A.M. (EST), FRIDAY,
APRIL 1, 1988

THE EMPLOYMENT SITUATION: MARCH 1988

Nonagricultural payroll employment continued to rise in March, the Bureau of Labor Statistics of the U.S. Department of Labor reported today. The overall jobless rate was 5.5 percent, and the civilian worker rate was 5.6 percent; each has declined four-tenths of a percentage point in the last 5 months and nearly a point over the past year.

Payroll employment, as measured by the monthly survey of business establishments, rose by 260,000 in March, seasonally adjusted, about in line with the average gains over the past year. On the other hand, total civilian employment, as estimated through the survey of households, showed a drop of 300,000, returning to the January level.

Unemployment (Household Survey Data)

The number of unemployed persons, at 6.8 million in March, seasonally adjusted, and the civilian worker unemployment rate, at 5.6 percent, were little changed from February. Both measures, however, have been drifting down in recent months. Compared with a year ago, the level of unemployment has fallen by a million, and the civilian worker unemployment rate has declined nearly a full percentage point. More than two-thirds of the over-the-year improvement in total unemployment was attributable to a drop in the number of unemployed persons who had lost their last jobs. (See tables A-2 and A-8.)

The unemployment rate for adult women fell four-tenths of a percentage point to 4.8 percent in March, the only significant decline among the major demographic groups. Jobless rates for adult men (4.9 percent), whites (4.7 percent), blacks (12.8 percent), and Hispanics (8.2 percent) showed little or no change, while the rate for teenagers (16.5 percent) rose. (See table A-3.)

Civilian Employment and the Labor Force (Household Survey Data)

Total civilian employment showed a decline of 300,000 in March, returning to the January level of 114.1 million, seasonally adjusted. The March movement followed gains averaging 300,000 per month from September to February. The percentage of the total civilian population that was working--the employment-population ratio--slipped to 62.0 percent, slightly below recent record highs. (See table A-2.)

After seasonal adjustment, the civilian labor force declined by 450,000 in March to 120.9 million. Accordingly, the labor force participation rate fell 0.3 percentage point to 65.7 percent. The March labor force was 1.6 million higher than a year earlier. (See table A-2.)

Table A. Major indicators of labor market activity, seasonally adjusted

Category	Quarterly averages		Monthly data			Feb.-Mar. change
	1987	1988	1988			
	IV	I	Jan.	Feb.	Mar.	
HOUSEHOLD DATA	Thousands of persons					
Labor force 1/	122,316	122,882	122,924	123,084	122,639	-445
Total employment 1/	115,235	115,954	115,878	116,145	115,839	-306
Civilian labor force	120,568	121,142	121,175	121,348	120,903	-445
Civilian employment	113,486	114,214	114,129	114,409	114,103	-306
Unemployment	7,082	6,928	7,046	6,938	6,801	-137
Not in labor force	62,899	62,825	62,647	62,621	63,208	587
Discouraged workers	910	1,027	N.A.	N.A.	N.A.	N.A.
	Percent of labor force					
Unemployment rates:						
All workers 1/	5.8	5.6	5.7	5.6	5.5	-0.1
All civilian workers	5.9	5.7	5.8	5.7	5.6	-.1
Adult men	5.0	5.0	5.1	4.9	4.9	0
Adult women	5.2	5.0	5.1	5.2	4.8	-.4
Teenagers	16.6	16.0	16.0	15.4	16.5	1.1
White	5.0	4.8	5.0	4.8	4.7	-.1
Black	12.2	12.5	12.2	12.6	12.8	.2
Hispanic origin	8.5	7.9	7.2	8.3	8.2	-.1
ESTABLISHMENT DATA	Thousands of jobs					
Nonfarm employment	103,293	p104,259	103,827	p104,344	p104,606	p262
Goods-producing	25,164	p25,324	25,205	p25,342	p25,426	p84
Service-producing	78,129	p78,935	78,622	p79,002	p79,180	p178
	Hours of work					
Average weekly hours:						
Total private	34.8	p34.7	34.8	p34.8	p34.6	p-0.2
Manufacturing	41.2	p41.0	41.2	p41.0	p40.9	p-.1
Overtime	3.9	p3.8	3.9	p3.7	p3.7	p0

1/ Includes the resident Armed Forces. N.A.=not available.
p=preliminary.

Discouraged Workers (Household Survey Data)

The number of discouraged workers--persons who want to work but do not look for jobs because they believe that they cannot find any--rose slightly, by about 115,000, to 1.0 million in the first quarter of 1988. Over the previous 4 quarters, the number of discouraged workers had declined by a total of 230,000. Men accounted for most of the first quarter rise. (See table A-14.)

Industry Payroll Employment (Establishment Survey Data)

Total nonagricultural payroll employment rose by 260,000 in March to a seasonally adjusted level of 104.6 million. The largest over-the-month gains occurred in the services and construction industries. Manufacturing employment was unchanged. (See table B-1.)

The services industry, with widespread employment gains totaling 85,000, again led the over-the-month growth in the service-producing sector. Wholesale trade which has grown steadily since July, added 15,000 jobs in March, almost entirely in its durable goods component. Retail trade, which had added a quarter of a million jobs on a seasonally adjusted basis during the first 2 months of this year, showed no further employment growth in March. In finance, insurance, and real estate, a rise in real estate payrolls (10,000) was partially offset by the second straight monthly decline in finance (5,000).

In the goods-producing sector, construction posted a second strong over-the-month gain (80,000). Since September, employment in that industry has risen by 270,000. Manufacturing employment, which has slowed in recent months following strong growth in the second half of 1987, was unchanged in March. Job gains in machinery and printing and publishing were offset by small declines in other manufacturing industries.

Weekly Hours (Establishment Survey Data)

The average workweek for all production or nonsupervisory workers on private nonagricultural payrolls decreased 0.2 hour in March to 34.6 hours, seasonally adjusted. The manufacturing workweek edged down 0.1 hour to 40.9. This is the same level as a year earlier but slightly below the historically high levels of last fall. Factory overtime was unchanged in March at 3.7 hours. (See table B-2.)

The index of aggregate weekly hours of production or nonsupervisory workers on private nonagricultural payrolls declined by 0.4 percent to 122.9 (1977=100), seasonally adjusted. The manufacturing index, at 95.3, was little changed from February. (See table B-5.)

Hourly and Weekly Earnings (Establishment Survey Data)

Average hourly earnings of production or nonsupervisory workers on private nonagricultural payrolls rose by 0.7 percent in March, seasonally adjusted, while average weekly earnings were virtually unchanged. Prior to seasonal adjustment, average hourly earnings edged up 2 cents to $9.20, while average weekly earnings decreased 23 cents, reflecting a small decline in the workweek. (See table B-3.)

The Hourly Earnings Index (Establishment Survey Data)

The Hourly Earnings Index (HEI) was 177.1 (1977=100) in March, seasonally adjusted, an increase of 0.4 percent from February. For the 12 months ended in March, the increase was 2.9 percent. In dollars of constant purchasing power, the HEI decreased 1.1 percent during the 12-month period ending in February. The HEI excludes the effects of two types of changes unrelated to underlying wage rate movements—fluctuations in manufacturing overtime and interindustry employment shifts. (See table B-4.)

The Employment Situation for April 1988 will be released on Friday, May 6, at 8:30 A.M. (EDT).

Explanatory Note

This news release presents statistics from two major surveys, the Current Population Survey (household survey) and the Current Employment Statistics Survey (establishment survey). The household survey provides the information on the labor force, total employment, and unemployment that appears in the A tables, marked HOUSEHOLD DATA. It is a sample survey of about 59,500 households that is conducted by the Bureau of the Census with most of the findings analyzed and published by the Bureau of Labor Statistics (BLS).

The establishment survey provides the information on the employment, hours, and earnings of workers on nonagricultural payrolls that appears in the B tables, marked ESTABLISHMENT DATA. This information is collected from payroll records by BLS in cooperation with State agencies. The sample includes over 290,000 establishments employing over 38 million people.

For both surveys, the data for a given month are actually collected for and relate to a particular week. In the household survey, unless otherwise indicated, it is the calendar week that contains the 12th day of the month, which is called the survey week. In the establishment survey, the reference week is the pay period including the 12th, which may or may not correspond directly to the calendar week.

The data in this release are affected by a number of technical factors, including definitions, survey differences, seasonal adjustments, and the inevitable variance in results between a survey of a sample and a census of the entire population. Each of these factors is explained below.

Coverage, definitions, and differences between surveys

The sample households in the household survey are selected so as to reflect the entire civilian noninstitutional population 16 years of age and older. Each person in a household is classified as employed, unemployed, or not in the labor force. Those who hold more than one job are classified according to the job at which they worked the most hours.

People are classified as *employed* if they did any work at all as paid civilians; worked in their own business or profession or on their own farm; or worked 15 hours or more in an enterprise operated by a member of their family, whether they were paid or not. People are also counted as employed if they were on unpaid leave because of illness, bad weather, disputes between labor and management, or personal reasons. Members of the Armed Forces stationed in the United States are also included in the employed total.

People are classified as *unemployed*, regardless of their eligibility for unemployment benefits or public assistance, if they meet all of the following criteria: They had no employment during the survey week; they were available for work at that time; and they made specific efforts to find employment sometime during the prior 4 weeks. Persons laid off from their former jobs and awaiting recall and those expecting to report to a job within 30 days need not be looking for work to be counted as unemployed.

The *labor force* equals the sum of the number employed and the number unemployed. The *unemployment rate* is the percentage of unemployed people in the labor force (civilian plus the resident Armed Forces). Table A-5 presents a special grouping of seven measures of unemployment based on varying definitions of unemployment and the labor force. The definitions are provided in the table. The most restrictive definition yields U-1 and the most comprehensive yields U-7. The overall unemployment rate is U-5a, while U-5b represents the same measure with a civilian labor force base.

Unlike the household survey, the establishment survey only counts wage and salary employees whose names appear on the payroll records of nonagricultural firms. As a result, there are many differences between the two surveys, among which are the following:

— The household survey, although based on a smaller sample, reflects a larger segment of the population; the establishment survey excludes agriculture, the self-employed, unpaid family workers, private household workers, and members of the resident Armed Forces.

— The household survey includes people on unpaid leave among the employed; the establishment survey does not;

— The household survey is limited to those 16 years of age and older; the establishment survey is not limited by age;

— The household survey has no duplication of individuals, because each individual is counted only once; in the establishment survey, employees working at more than one job or otherwise appearing on more than one payroll would be counted separately for each appearance.

Other differences between the two surveys are described in "Comparing Employment Estimates from Household and Payroll Surveys," which may be obtained from the BLS upon request.

Seasonal adjustment

Over the course of a year, the size of the Nation's labor force and the levels of employment and unemployment undergo sharp fluctuations due to such seasonal events as changes in weather, reduced or expanded production, harvests, major holidays, and the opening and closing of schools. For example, the labor force increases by a large number each June, when schools close and many young people enter the job market. The effect of such seasonal variation can be very large; over the course of a year, for example, seasonality may account for as much as 95 percent of the month-to-month changes in unemployment.

Because these seasonal events follow a more or less regular pattern each year, their influence on statistical trends can be eliminated by adjusting the statistics from month to month. These adjustments make nonseasonal developments, such as declines in economic activity or increases in the participation of women in the labor force, easier to spot. To return to the school's-out example, the large number of people entering the labor force each June is likely to obscure any other changes that have taken place since May, making it difficult to determine if the level of economic activity has risen or declined. However, because the effect of students finishing school in previous years is known, the statistics for the current year can be adjusted to allow for a comparable change. Insofar as the seasonal adjustment is made correctly, the adjusted figure provides a more useful tool with which to analyze changes in economic activity.

Measures of labor force, employment, and unemployment contain components such as age and sex. Statistics for all employees, production workers, average weekly hours, and average hourly earnings include components based on the employer's industry. All these statistics can be seasonally adjusted either by adjusting the total or by adjusting each of the components and combining them. The second procedure usually yields more accurate information and is therefore followed by BLS. For example, the seasonally adjusted figure for the labor force is the sum of eight seasonally adjusted civilian employment components, plus the resident Armed Forces total (not adjusted for seasonality), and four seasonally adjusted unemployment components; the total for unemployment is the sum of the four unemployment components; and the overall unemployment rate is derived by dividing the resulting estimate of total unemployment by the estimate of the labor force.

The numerical factors used to make the seasonal adjustments are recalculated regularly. For the household survey, the factors are calculated for the January-June period and again for the July-December period. The January revision is applied to data that have been published over the previous 5 years. For the establishment survey, updated factors for seasonal adjustment are calculated only once a year, along with the introduction of new benchmarks which are discussed at the end of the next section.

Sampling variability

Statistics based on the household and establishment surveys are subject to sampling error, that is, the estimate of the number of people employed and the other estimates drawn from these surveys probably differ from the figures that would be obtained from a complete census, even if the same questionnaires and procedures were used. In the household survey, the amount of the differences can be expressed in terms of standard errors. The numerical value of a standard error depends upon the size of the sample, the results of the survey, and other factors. However, the numerical value is always such that the chances are approximately 68 out of 100 that an estimate based on the sample will differ by no more than the standard error from the results of a complete census. The chances are approximately 90 out of 100 that an estimate based on the sample will differ by no more than 1.6 times the standard error from the results of a complete census. At approximately the 90-percent level of confidence—the confidence limits used by BLS in its analyses—the error for the monthly change in total employment is on the order of plus or minus 328,000; for total unemployment it is 220,000; and, for the overall unemployment rate, it is 0.19 percentage point. These figures do not mean that the sample results are off by these magnitudes but, rather, that the chances are approximately 90 out of 100 that the "true" level or rate would not be expected to differ from the estimates by more than these amounts.

Sampling errors for monthly surveys are reduced when the data are cumulated for several months, such as quarterly or annually. Also, as a general rule, the smaller the estimate, the larger the sampling error. Therefore, relatively speaking, the estimate of the size of the labor force is subject to less error than is the estimate of the number unemployed. And, among the unemployed, the sampling error for the jobless rate of adult men, for example, is much smaller than is the error for the jobless rate of teenagers. Specifically, the error on monthly change in the jobless rate for men is .26 percentage point; for teenagers, it is 1.25 percentage points.

In the establishment survey, estimates for the 2 most current months are based on incomplete returns; for this reason, these estimates are labeled preliminary in the tables. When all the returns in the sample have been received, the estimates are revised. In other words, data for the month of September are published in preliminary form in October and November and in final form in December. To remove errors that build up over time, a comprehensive count of the employed is conducted each year. The results of this survey are used to establish new benchmarks—comprehensive counts of employment—against which month-to-month changes can be measured. The new benchmarks also incorporate changes in the classification of industries and allow for the formation of new establishments.

Additional statistics and other information

In order to provide a broad view of the Nation's employment situation, BLS regularly publishes a wide variety of data in this news release. More comprehensive statistics are contained in *Employment and Earnings*, published each month by BLS. It is available for $8.50 per issue or $22.00 per year from the U.S. Government Printing Office, Washington, D.C., 20204. A check or money order made out to the Superintendent of Documents must accompany all orders.

Employment and Earnings also provides approximations of the standard errors for the household survey data published in this release. For unemployment and other labor force categories, the standard errors appear in tables B through J of its "Explanatory Notes." Measures of the reliability of the data drawn from the establishment survey and the actual amounts of revision due to benchmark adjustments are provided in tables M, O, P, and Q of that publication.

Table A-1. Employment status of the population, including Armed Forces in the United States, by sex

(Numbers in thousands)

Employment status and sex	Not seasonally adjusted			Seasonally adjusted[1]					
	Mar. 1987	Feb. 1988	Mar. 1988	Mar. 1987	Nov. 1987	Dec. 1987	Jan. 1988	Feb. 1988	Mar. 1988
TOTAL									
Noninstitutional population[2]	183,915	185,705	185,847	183,915	185,225	185,370	185,571	185,705	185,847
Labor force[2]	120,069	121,678	121,693	120,982	122,349	122,472	122,924	123,084	122,639
Participation rate[3]	65.3	65.5	65.5	65.8	66.1	66.1	66.2	66.3	66.0
Total employed[2]	111,965	114,196	114,603	113,191	115,259	115,494	115,878	116,145	115,839
Employment-population ratio[4]	60.9	61.5	61.7	61.5	62.2	62.3	62.4	62.5	62.3
Resident Armed Forces	1,736	1,736	1,736	1,736	1,755	1,750	1,749	1,736	1,736
Civilian employed	110,229	112,460	112,867	111,455	113,504	113,744	114,129	114,409	114,103
Agriculture	2,932	2,760	2,902	3,237	3,172	3,215	3,293	3,228	3,204
Nonagricultural industries	107,297	109,700	109,964	108,218	110,332	110,529	110,836	111,182	110,899
Unemployed	8,124	7,482	7,090	7,791	7,090	6,978	7,046	6,938	6,801
Unemployment rate[5]	6.8	6.1	5.8	6.4	5.8	5.7	5.7	5.6	5.5
Not in labor force	63,826	64,026	64,154	62,933	62,876	62,898	62,647	62,621	63,208
Men, 16 years and over									
Noninstitutional population[2]	88,186	89,099	89,168	88,186	88,849	88,924	89,033	89,099	89,168
Labor force[2]	66,964	67,484	67,521	67,590	68,019	68,030	68,243	68,343	68,148
Participation rate[3]	76.0	75.7	75.7	76.6	76.6	76.5	76.6	76.7	76.4
Total employed[2]	62,291	63,252	63,385	63,263	64,174	64,245	64,396	64,636	64,332
Employment-population ratio[4]	70.6	71.0	71.1	71.7	72.2	72.2	72.3	72.5	72.1
Resident Armed Forces	1,575	1,577	1,573	1,575	1,593	1,589	1,588	1,577	1,573
Civilian employed	60,716	61,675	61,812	61,688	62,581	62,656	62,808	63,059	62,759
Unemployed	4,693	4,232	4,136	4,327	3,845	3,785	3,847	3,707	3,816
Unemployment rate[5]	7.0	6.3	6.1	6.4	5.7	5.6	5.6	5.4	5.6
Women, 16 years and over									
Noninstitutional population[2]	95,729	96,606	96,679	95,729	96,376	96,446	96,538	96,606	96,679
Labor force[2]	53,106	54,195	54,173	53,392	54,330	54,442	54,681	54,740	54,491
Participation rate[3]	55.5	56.1	56.0	55.8	56.4	56.4	56.6	56.7	56.4
Total employed[2]	49,674	50,944	51,218	49,928	51,085	51,249	51,482	51,509	51,507
Employment-population ratio[4]	51.9	52.7	53.0	52.2	53.0	53.1	53.3	53.3	53.3
Resident Armed Forces	161	159	163	161	162	161	161	159	163
Civilian employed	49,513	50,785	51,055	49,767	50,923	51,088	51,321	51,350	51,344
Unemployed	3,432	3,250	2,955	3,464	3,245	3,193	3,200	3,231	2,985
Unemployment rate[5]	6.5	6.0	5.5	6.5	6.0	5.9	5.9	5.9	5.5

---

[1] The population and Armed Forces figures are not adjusted for seasonal variation; therefore, identical numbers appear in the unadjusted and seasonally adjusted columns.

[2] Includes members of the Armed Forces stationed in the United States.

[3] Labor force as a percent of the noninstitutional population.

[4] Total employment as a percent of the noninstitutional population.

[5] Unemployment as a percent of the labor force (including the resident Armed Forces).

Table A-2. Employment status of the civilian population by sex and age

(Numbers in thousands)

Employment status, sex, and age	Not seasonally adjusted			Seasonally adjusted[1]					
	Mar. 1987	Feb. 1988	Mar. 1988	Mar. 1987	Nov. 1987	Dec. 1987	Jan. 1988	Feb. 1988	Mar. 1988
TOTAL									
Civilian noninstitutional population	182,179	183,969	184,111	182,179	183,470	183,620	183,822	183,969	184,111
Civilian labor force	118,353	119,942	119,957	119,246	120,594	120,722	121,175	121,348	120,903
Participation rate	65.0	65.2	65.2	65.5	65.7	65.7	65.9	66.0	65.7
Employed	110,229	112,460	112,867	111,455	113,504	113,744	114,129	114,409	114,100
Employment-population ratio[2]	60.5	61.1	61.3	61.2	61.9	61.9	62.1	62.2	62.0
Unemployed	8,124	7,482	7,090	7,791	7,090	6,978	7,046	6,939	6,801
Unemployment rate	6.9	6.2	5.9	6.5	5.9	5.8	5.8	5.7	5.6
Men, 20 years and over									
Civilian noninstitutional population	79,303	80,203	80,260	79,303	79,865	80,002	80,120	80,203	80,260
Civilian labor force	61,693	62,205	62,236	61,933	62,299	62,248	62,440	62,696	62,487
Participation rate	77.8	77.6	77.5	78.1	78.0	77.8	77.9	78.2	77.9
Employed	57,752	58,626	58,807	58,380	59,164	59,165	59,287	59,625	59,407
Employment-population ratio[2]	72.8	73.1	73.3	73.6	74.1	74.0	74.0	74.3	74.0
Agriculture	2,201	2,027	2,109	2,361	2,297	2,298	2,323	2,280	2,253
Nonagricultural industries	55,551	56,599	56,697	56,019	56,867	56,867	56,964	57,344	57,154
Unemployed	3,941	3,579	3,432	3,553	3,135	3,083	3,154	3,071	3,080
Unemployment rate	6.4	5.8	5.5	5.7	5.0	4.9	5.1	4.9	4.9
Women, 20 years and over									
Civilian noninstitutional population	88,321	89,170	89,281	88,321	88,923	89,010	89,110	89,170	89,281
Civilian labor force	49,374	50,407	50,478	49,414	50,254	50,361	50,558	50,640	50,542
Participation rate	55.9	56.5	56.5	55.9	56.5	56.6	56.7	56.8	56.6
Employed	46,531	47,714	48,051	46,582	47,634	47,750	47,977	48,005	48,132
Employment-population ratio[2]	52.7	53.5	53.8	52.7	53.6	53.6	53.8	53.8	53.9
Agriculture	530	552	575	602	636	643	646	664	656
Nonagricultural industries	46,001	47,162	47,476	45,980	46,998	47,107	47,331	47,341	47,476
Unemployed	2,843	2,693	2,425	2,832	2,620	2,611	2,581	2,635	2,411
Unemployment rate	5.8	5.3	4.8	5.7	5.2	5.2	5.1	5.2	4.8
Both sexes, 16 to 19 years									
Civilian noninstitutional population	14,555	14,596	14,591	14,555	14,683	14,608	14,592	14,596	14,591
Civilian labor force	7,287	7,331	7,243	7,899	8,041	8,113	8,177	8,011	7,865
Participation rate	50.1	50.2	49.6	54.3	54.8	55.5	56.0	54.9	53.9
Employed	5,946	6,120	6,009	6,493	6,706	6,809	6,865	6,779	6,564
Employment-population ratio[2]	40.9	42.0	41.2	44.6	45.7	46.6	47.0	46.5	45.0
Agriculture	202	181	218	274	239	274	323	283	285
Nonagricultural industries	5,745	5,939	5,791	6,219	6,467	6,535	6,542	6,496	6,279
Unemployed	1,341	1,211	1,234	1,406	1,335	1,304	1,312	1,232	1,301
Unemployment rate	18.4	16.5	17.0	17.8	16.6	16.1	16.0	15.4	16.5

---

[1] The population figures are not adjusted for seasonal variation; therefore, identical numbers appear in the unadjusted and seasonally adjusted columns.

[2] Civilian employment as a percent of the civilian noninstitutional population.

Table A-3. Employment status of the civilian population by race, sex, age, and Hispanic origin

(Numbers in thousands)

Employment status, race, sex, age, and Hispanic origin	Not seasonally adjusted			Seasonally adjusted[1]					
	Mar. 1987	Feb. 1988	Mar. 1988	Mar. 1987	Nov. 1987	Dec. 1987	Jan. 1988	Feb. 1988	Mar. 1988
WHITE									
Civilian noninstitutional population	156,561	157,773	157,888	156,561	157,449	157,562	157,676	157,773	157,888
Civilian labor force	102,137	103,398	103,388	102,836	103,731	103,907	104,252	104,530	104,171
Participation rate	65.2	65.5	65.5	65.7	65.9	66.0	66.1	66.3	66.0
Employed	96,032	97,819	98,202	97,074	98,492	98,779	99,044	99,474	99,274
Employment-population ratio[2]	61.3	62.0	62.2	62.0	62.6	62.7	62.8	63.0	62.9
Unemployed	6,105	5,579	5,186	5,762	5,239	5,128	5,208	5,056	4,897
Unemployment rate	6.0	5.4	5.0	5.6	5.1	4.9	5.0	4.8	4.7
Men, 20 years and over									
Civilian labor force	53,936	54,268	54,307	54,097	54,381	54,368	54,485	54,660	54,522
Participation rate	78.2	77.9	77.9	78.4	78.3	78.2	78.3	78.5	78.2
Employed	50,850	51,551	51,723	51,371	51,969	52,046	52,083	52,400	52,245
Employment-population ratio[2]	73.7	74.0	74.2	74.5	74.9	74.9	74.8	75.2	75.0
Unemployed	3,086	2,717	2,584	2,726	2,412	2,322	2,402	2,260	2,277
Unemployment rate	5.7	5.0	4.8	5.0	4.4	4.3	4.4	4.1	4.2
Women, 20 years and over									
Civilian labor force	41,834	42,749	42,769	41,877	42,464	42,569	42,710	42,915	42,841
Participation rate	55.3	56.1	56.1	55.4	55.8	55.9	56.1	56.3	56.2
Employed	39,839	40,780	41,101	39,890	40,606	40,712	40,897	40,985	41,183
Employment-population ratio[2]	52.7	53.5	53.9	52.7	53.4	53.5	53.7	53.8	54.0
Unemployed	1,995	1,969	1,668	1,987	1,858	1,857	1,813	1,930	1,658
Unemployment rate	4.8	4.6	3.9	4.7	4.4	4.4	4.2	4.5	3.9
Both sexes, 16 to 19 years									
Civilian labor force	6,367	6,381	6,312	6,862	6,886	6,970	7,087	6,965	6,807
Participation rate	53.3	53.7	53.1	57.5	57.7	58.6	59.6	58.6	57.2
Employed	5,343	5,498	5,378	5,813	5,917	6,021	6,095	6,100	5,845
Employment-population ratio[2]	44.8	46.2	45.2	48.7	49.6	50.6	51.2	51.3	49.1
Unemployed	1,024	883	934	1,049	969	949	992	865	962
Unemployment rate	16.1	14.0	14.8	15.3	14.1	13.6	14.0	12.4	14.1
Men	18.2	14.8	17.1	16.8	14.8	14.9	14.4	12.2	15.7
Women	13.9	13.2	12.3	13.7	13.3	12.3	13.6	12.7	12.4
BLACK									
Civilian noninstitutional population	20,240	20,580	20,596	20,240	20,482	20,508	20,530	20,580	20,596
Civilian labor force	12,687	12,965	12,932	12,853	13,193	13,215	13,222	13,166	13,098
Participation rate	62.7	63.0	62.8	63.5	64.4	64.4	64.4	64.0	63.6
Employed	10,927	11,286	11,273	11,072	11,589	11,605	11,608	11,504	11,420
Employment-population ratio[2]	54.0	54.9	54.7	54.7	56.6	56.6	56.5	55.9	55.4
Unemployed	1,760	1,679	1,659	1,781	1,604	1,610	1,614	1,662	1,678
Unemployment rate	13.9	12.9	12.8	13.9	12.2	12.2	12.2	12.6	12.8
Men, 20 years and over									
Civilian labor force	5,949	6,094	6,081	5,986	6,045	6,043	6,115	6,166	6,127
Participation rate	74.2	74.7	74.4	74.8	74.5	74.3	75.0	75.6	75.0
Employed	5,236	5,352	5,369	5,299	5,430	5,430	5,497	5,472	5,429
Employment-population ratio[2]	65.3	66.6	66.7	66.1	66.9	66.8	67.5	67.1	66.4
Unemployed	713	742	712	687	615	613	618	694	698
Unemployment rate	12.0	12.2	11.7	11.5	10.2	10.1	10.1	11.3	11.4
Women, 20 years and over									
Civilian labor force	5,971	6,114	6,112	5,994	6,207	6,224	6,244	6,131	6,136
Participation rate	59.3	59.7	59.6	59.5	60.9	61.0	61.1	59.9	59.9
Employed	5,211	5,462	5,443	5,230	5,537	5,544	5,560	5,495	5,465
Employment-population ratio[2]	51.7	53.4	53.1	51.9	54.3	54.3	54.3	53.7	53.3
Unemployed	760	652	669	764	670	680	684	636	671
Unemployment rate	12.7	10.7	10.9	12.7	10.8	10.9	11.1	10.4	10.9
Both sexes, 16 to 19 years									
Civilian labor force	768	757	740	864	941	948	863	870	834
Participation rate	35.8	34.8	34.0	40.1	43.3	43.7	39.8	40.0	38.3
Employed	481	473	461	544	622	631	561	537	526
Employment-population ratio[2]	22.3	21.8	21.2	25.2	28.6	29.1	25.8	24.7	24.2
Unemployed	287	284	279	320	319	317	302	333	308
Unemployment rate	37.4	37.5	37.6	37.0	33.9	33.4	35.0	38.3	36.9
Men	38.8	42.9	40.2	36.1	32.2	33.5	35.1	42.0	39.0
Women	36.0	32.5	35.3	38.0	35.8	33.4	34.9	34.7	35.0

See footnotes at end of table.

Table A-3. Employment status of the civilian population by race, sex, age, and Hispanic origin—Continued

(Numbers in thousands)

Employment status, race, sex, age, and Hispanic origin	Not seasonally adjusted			Seasonally adjusted[1]					
	Mar. 1987	Feb. 1988	Mar. 1988	Mar. 1987	Nov. 1987	Dec. 1987	Jan. 1988	Feb. 1988	Mar. 1988
HISPANIC ORIGIN									
Civilian noninstitutional population	12,732	13,153	13,192	12,732	13,043	13,082	13,115	13,153	13,192
Civilian labor force	8,326	8,905	8,726	8,395	8,763	8,772	8,879	9,017	8,803
Participation rate	65.4	67.7	66.1	65.9	67.2	67.1	67.7	68.6	66.7
Employed	7,547	8,085	7,990	7,632	7,978	8,058	8,236	8,268	8,079
Employment-population ratio[2]	59.3	61.5	60.6	59.9	61.2	61.6	62.8	62.9	61.2
Unemployed	780	820	736	763	785	714	642	749	724
Unemployment rate	9.4	9.2	8.4	9.1	9.0	8.1	7.2	8.3	8.2

[1] The population figures are not adjusted for seasonal variation; therefore, identical numbers appear in the unadjusted and seasonally adjusted columns.

[2] Civilian employment as a percent of the civilian noninstitutional population.

NOTE: Detail for the above race and Hispanic-origin groups will not sum to totals because data for the "other races" group are not presented and Hispanics are included in both the white and black population groups.

Table A-4. Selected employment indicators

(In thousands)

Category	Not seasonally adjusted			Seasonally adjusted					
	Mar. 1987	Feb. 1988	Mar. 1988	Mar. 1987	Nov. 1987	Dec. 1987	Jan. 1988	Feb. 1988	Mar. 1988
CHARACTERISTIC									
Civilian employed, 16 years and over	110,229	112,460	112,867	111,456	113,504	113,744	114,129	114,408	114,103
Married men, spouse present	38,739	39,888	40,157	40,054	40,645	40,711	40,404	40,475	40,481
Married women, spouse present	27,937	28,477	28,776	27,985	28,175	28,249	28,441	28,707	28,805
Women who maintain families	5,983	6,157	6,178	5,946	6,237	6,227	6,166	6,157	6,160
MAJOR INDUSTRY AND CLASS OF WORKER									
Agriculture:									
Wage and salary workers	1,484	1,407	1,467	1,699	1,586	1,586	1,666	1,677	1,648
Self-employed workers	1,303	1,274	1,309	1,416	1,407	1,450	1,454	1,414	1,423
Unpaid family workers	135	79	126	152	155	156	138	114	142
Nonagricultural industries:									
Wage and salary workers	99,092	101,341	101,514	99,863	101,943	101,997	102,507	102,683	102,279
Government	16,883	17,270	17,195	16,594	17,118	17,064	17,197	16,948	16,908
Private industries	82,209	84,071	84,319	83,269	84,825	84,933	85,310	85,735	85,371
Private households	1,134	1,087	1,086	1,227	1,286	1,200	1,147	1,170	1,175
Other industries	81,075	82,984	83,233	82,042	83,539	83,733	84,163	84,565	84,196
Self-employed workers	7,921	8,146	8,190	8,082	8,222	8,280	8,190	8,312	8,366
Unpaid family workers	264	213	261	270	235	246	237	228	248
PERSONS AT WORK PART TIME[1]									
All industries:									
Part time for economic reasons	5,232	5,377	5,129	5,459	5,534	5,282	5,387	5,568	5,343
Slack work	2,440	2,881	2,520	2,436	2,408	2,284	2,398	2,478	2,520
Could only find part-time work	2,504	2,390	2,347	2,707	2,698	2,838	2,840	2,588	2,536
Voluntary part time	15,145	15,446	15,567	14,201	14,523	14,711	14,571	14,672	14,803
Nonagricultural industries:									
Part time for economic reasons	4,989	5,117	4,832	5,180	5,241	5,004	5,146	5,254	5,108
Slack work	2,280	2,504	2,371	2,234	2,209	2,111	2,280	2,327	2,325
Could only find part-time work	2,434	2,292	2,307	2,812	2,597	2,562	2,586	2,467	2,475
Voluntary part time	14,681	15,055	15,131	13,717	14,084	14,222	14,098	14,123	14,141

[1] Excludes persons "with a job but not at work" during the survey period for such reasons as vacation, illness, or industrial dispute.

Table A-5. Range of unemployment measures based on varying definitions of unemployment and the labor force, seasonally adjusted

(Percent)

Measure	Quarterly averages					Monthly data		
	1987				1988	1988		
	I	II	III	IV	I	Jan.	Feb.	Mar.
U-1 Persons unemployed 15 weeks or longer as a percent of the civilian labor force	1.8	1.7	1.6	1.5	1.4	1.4	1.4	1.4
U-2 Job losers as a percent of the civilian labor force	3.2	3.0	2.8	2.7	2.6	2.6	2.6	2.6
U-3 Unemployed persons 25 years and over as a percent of the civilian labor force	5.1	4.8	4.6	4.5	4.4	4.5	4.5	4.2
U-4 Unemployed full-time jobseekers as a percent of the full-time civilian labor force	6.2	5.9	5.6	5.5	5.4	5.4	5.3	5.3
U-5a Total unemployed as a percent of the labor force, including the resident Armed Forces	6.5	6.2	5.9	5.8	5.6	5.7	5.6	5.5
U-5b Total unemployed as a percent of the civilian labor force	6.6	6.3	6.0	5.9	5.7	5.8	5.7	5.6
U-6 Total full-time jobseekers plus 1/2 part-time jobseekers plus 1/2 total on part time for economic reasons as a percent of the civilian labor force less 1/2 of the part-time labor force	9.0	8.5	8.2	8.1	8.0	8.0	8.0	7.9
U-7 Total full-time jobseekers plus 1/2 part-time jobseekers plus 1/2 total on part time for economic reasons plus discouraged workers as a percent of the civilian labor force plus discouraged workers less 1/2 of the part-time labor force	9.9	9.3	9.0	8.8	8.6	N.A.	N.A.	N.A.

N.A. = not available.

Table A-6. Selected unemployment indicators, seasonally adjusted

Category	Number of unemployed persons (in thousands)			Unemployment rates[1]					
	Mar. 1987	Feb. 1988	Mar. 1988	Mar. 1987	Nov. 1987	Dec. 1987	Jan. 1988	Feb. 1988	Mar. 1988
CHARACTERISTIC									
Total, 16 years and over	7,791	6,938	6,801	6.6	5.9	5.8	5.8	5.7	5.6
Men, 16 years and over	4,327	3,707	3,816	6.6	5.8	5.7	5.8	5.6	5.7
Men, 20 years and over	3,553	3,071	3,089	5.7	5.0	4.9	5.1	4.8	4.9
Women, 16 years and over	3,464	3,231	2,985	6.5	6.0	5.9	5.9	5.8	5.5
Women, 20 years and over	2,632	2,635	2,411	5.7	5.2	5.2	5.1	5.2	4.8
Both sexes, 16 to 19 years	1,406	1,232	1,301	17.8	16.6	16.1	16.0	15.4	16.5
Married men, spouse present	1,713	1,428	1,422	4.1	3.5	3.4	3.6	3.4	3.4
Married women, spouse present	1,306	1,226	1,186	4.5	4.2	4.3	4.2	4.1	4.0
Women who maintain families	636	567	497	9.7	8.5	8.4	8.9	8.3	7.5
Full-time workers	6,246	5,549	5,466	6.1	5.5	5.4	5.4	5.3	5.3
Part-time workers	1,571	1,379	1,330	9.1	8.2	8.0	8.3	7.9	7.7
Labor force time lost[2]	—	—	—	7.4	6.8	6.6	6.6	6.6	6.5
INDUSTRY									
Nonagricultural private wage and salary workers	5,806	5,175	5,061	6.5	5.8	5.7	5.8	5.7	5.6
Goods-producing industries	2,306	1,962	1,880	8.0	6.5	6.4	7.1	6.9	6.5
Mining	82	66	63	9.5	7.0	8.0	7.7	7.8	7.9
Construction	762	700	663	12.4	10.6	10.6	12.2	11.0	10.7
Manufacturing	1,464	1,226	1,153	6.7	5.3	5.1	5.6	5.6	5.2
Durable goods	848	763	683	6.6	4.8	4.8	5.5	5.9	5.2
Nondurable goods	616	463	471	7.0	5.9	5.6	5.8	5.3	5.3
Service-producing industries	3,498	3,182	3,181	5.8	5.5	5.3	5.3	5.1	5.2
Transportation and public utilities	281	236	272	4.5	4.5	4.6	3.6	3.8	4.2
Wholesale and retail trade	1,678	1,476	1,564	7.3	6.8	6.2	6.1	6.4	6.8
Finance and service industries	1,539	1,470	1,345	4.9	4.8	4.8	4.9	4.5	4.2
Government workers	583	483	485	3.5	3.4	3.2	3.0	2.8	2.8
Agricultural wage and salary workers	206	191	203	10.8	11.1	10.9	11.5	10.2	11.0

[1] Unemployment as a percent of the civilian labor force.

[2] Aggregate hours lost by the unemployed and persons on part time for economic reasons as a percent of potentially available labor force hours.

Table A-7. Duration of unemployment

(Numbers in thousands)

Weeks of unemployment	Not seasonally adjusted			Seasonally adjusted					
	Mar. 1987	Feb. 1988	Mar. 1988	Mar. 1987	Nov. 1987	Dec. 1987	Jan. 1988	Feb. 1988	Mar. 1988
DURATION									
Less than 5 weeks	3,080	2,973	2,759	3,352	3,218	3,230	3,086	3,084	3,006
5 to 14 weeks	2,672	2,602	2,332	2,411	2,029	1,968	2,259	2,146	2,101
15 weeks and over	2,384	1,907	1,969	2,055	1,824	1,791	1,733	1,740	1,722
15 to 26 weeks	1,196	977	1,108	944	898	892	839	841	887
27 weeks and over	1,188	930	861	1,111	935	899	894	899	835
Average (mean) duration, in weeks	15.6	14.3	14.3	14.9	14.0	14.2	14.4	14.4	13.7
Median duration, in weeks	8.2	7.1	8.0	6.7	6.1	6.6	6.4	6.4	6.6
PERCENT DISTRIBUTION									
Total unemployed	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Less than 5 weeks	37.8	39.7	38.9	42.9	45.4	46.2	43.6	44.3	44.0
5 to 14 weeks	32.9	34.8	32.9	30.8	28.7	28.2	31.9	30.8	30.8
15 weeks and over	29.3	25.5	28.2	26.3	25.9	25.6	24.5	25.0	25.2
15 to 26 weeks	14.7	13.1	15.6	12.1	12.7	12.8	11.9	12.1	13.0
27 weeks and over	14.6	12.4	12.6	14.2	13.2	12.8	12.6	12.9	12.2

Table A-8. Reason for unemployment

(Numbers in thousands)

Reasons	Not seasonally adjusted			Seasonally adjusted					
	Mar. 1987	Feb. 1988	Mar. 1988	Mar. 1987	Nov. 1987	Dec. 1987	Jan. 1988	Feb. 1988	Mar. 1988
NUMBER OF UNEMPLOYED									
Job losers	4,227	3,739	3,508	3,791	3,307	3,200	3,209	3,207	3,139
On layoff	1,206	1,181	1,088	1,009	878	856	888	884	899
Other job losers	3,021	2,558	2,420	2,782	2,429	2,344	2,321	2,323	2,240
Job leavers	934	988	1,012	995	926	946	1,082	961	1,075
Reentrants	2,107	1,974	1,784	2,078	1,974	1,945	1,917	1,951	1,756
New entrants	857	782	790	952	855	909	885	864	887
PERCENT DISTRIBUTION									
Total unemployed	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Job losers	52.0	50.0	49.5	48.5	46.8	45.7	45.2	45.9	45.8
On layoff	14.8	15.8	15.3	12.8	12.4	12.2	12.5	12.7	13.1
Other job losers	37.2	34.2	34.2	35.7	34.4	33.5	32.7	33.3	32.7
Job leavers	11.5	13.2	14.3	12.7	13.1	13.5	15.3	13.8	15.7
Reentrants	25.9	26.4	25.2	26.6	28.0	27.8	27.0	27.9	25.6
New entrants	10.5	10.4	11.1	12.2	12.1	13.0	12.5	12.4	12.9
UNEMPLOYED AS A PERCENT OF THE CIVILIAN LABOR FORCE									
Job losers	3.6	3.1	2.9	3.2	2.7	2.7	2.6	2.6	2.6
Job leavers	.8	.8	.8	.8	.8	.8	.9	.8	.9
Reentrants	1.8	1.6	1.5	1.7	1.6	1.6	1.6	1.6	1.5
New entrants	.7	.7	.7	.8	.7	.8	.7	.7	.7

Table A-9. Unemployed persons by sex and age, seasonally adjusted

Sex and age	Number of unemployed persons (in thousands)			Unemployment rates[1]					
	Mar. 1987	Feb. 1988	Mar. 1988	Mar. 1987	Nov. 1987	Dec. 1987	Jan. 1988	Feb. 1988	Mar. 1988
Total, 16 years and over	7,791	6,938	6,801	6.5	5.9	5.8	5.8	5.7	5.6
16 to 24 years	2,951	2,525	2,637	12.8	11.6	11.2	11.6	11.1	11.7
16 to 19 years	1,408	1,232	1,301	17.8	16.6	16.1	16.0	15.4	16.5
16 to 17 years	666	580	569	19.9	19.2	17.8	18.7	17.4	17.6
18 to 19 years	741	656	732	16.2	14.8	14.7	14.5	13.9	15.8
20 to 24 years	1,545	1,293	1,336	10.2	8.9	8.5	9.1	8.7	9.1
25 years and over	4,836	4,416	4,161	5.0	4.5	4.5	4.5	4.5	4.2
25 to 54 years	4,339	3,926	3,730	5.3	4.7	4.8	4.7	4.7	4.5
55 years and over	503	499	441	3.4	3.4	3.2	3.5	3.3	2.9
Men, 16 years and over	4,327	3,707	3,816	6.6	5.8	5.7	5.8	5.6	5.7
16 to 24 years	1,586	1,333	1,423	13.2	12.0	11.7	12.2	11.3	12.1
16 to 19 years	774	638	727	19.0	17.2	17.2	18.4	15.6	17.8
16 to 17 years	347	285	313	20.3	20.4	19.3	19.4	16.9	18.5
18 to 19 years	426	354	414	17.9	14.8	15.3	14.9	14.7	17.3
20 to 24 years	812	697	696	10.2	9.2	8.7	9.9	9.0	9.1
25 years and over	2,735	2,380	2,386	5.1	4.4	4.4	4.4	4.3	4.3
25 to 54 years	2,413	2,095	2,089	5.3	4.6	4.6	4.5	4.5	4.5
55 years and over	318	306	299	3.6	3.5	3.2	4.0	3.4	3.4
Women, 16 years and over	3,464	3,231	2,985	6.5	6.0	5.9	5.9	5.9	5.5
16 to 24 years	1,366	1,192	1,214	12.4	11.2	10.7	10.9	10.8	11.3
16 to 19 years	632	596	574	16.6	16.0	14.8	15.6	15.1	15.2
16 to 17 years	318	295	256	19.6	17.9	16.2	17.9	18.0	16.6
18 to 19 years	315	301	318	14.3	14.7	14.1	14.1	13.1	14.2
20 to 24 years	733	596	640	10.1	8.6	8.4	8.2	8.4	9.1
25 years and over	2,103	2,026	1,776	5.0	4.7	4.7	4.6	4.7	4.1
25 to 54 years	1,926	1,831	1,641	5.3	4.9	4.9	4.9	4.9	4.4
55 years and over	165	194	142	3.0	3.2	3.3	2.8	3.1	2.3

[1] Unemployment as a percent of the civilian labor force.

Table A-10. Employment status of black and other workers

(Numbers in thousands)

Employment status	Not seasonally adjusted			Seasonally adjusted[1]					
	Mar. 1987	Feb. 1988	Mar. 1988	Mar. 1987	Nov. 1987	Dec. 1987	Jan. 1988	Feb. 1988	Mar. 1988
Civilian noninstitutional population	25,618	26,196	26,243	25,618	26,021	26,068	26,146	26,196	26,243
Civilian labor force	16,216	16,544	16,569	16,434	16,869	16,853	16,926	16,779	16,779
Participation rate	63.3	63.2	63.1	64.2	64.8	64.7	64.7	64.1	63.9
Employed	14,197	14,641	14,664	14,392	15,017	15,008	15,076	14,884	14,853
Employment-population ratio[2]	55.4	55.9	55.9	56.2	57.7	57.6	57.7	56.8	56.6
Unemployed	2,019	1,904	1,905	2,042	1,852	1,845	1,850	1,895	1,926
Unemployment rate	12.5	11.5	11.5	12.4	11.0	10.9	10.9	11.3	11.5
Not in labor force	9,402	9,652	9,674	9,184	9,152	9,215	9,220	9,417	9,464

[1] The population figures are not adjusted for seasonal variation; therefore, identical numbers appear in the unadjusted and seasonally adjusted columns.

[2] Civilian employment as a percent of the civilian noninstitutional population.

Table A-11. Occupational status of the employed and unemployed, not seasonally adjusted

(Numbers in thousands)

Occupation	Civilian employed		Unemployed		Unemployment rate	
	Mar. 1987	Mar. 1988	Mar. 1987	Mar. 1988	Mar. 1987	Mar. 1988
Total, 16 years and over[1]	110,229	112,867	8,124	7,080	6.9	5.9
Managerial and professional specialty	27,674	28,928	638	473	2.3	1.6
Executive, administrative, and managerial	13,002	13,860	349	284	2.6	2.0
Professional specialty	14,673	15,068	289	189	1.9	1.2
Technical, sales, and administrative support	34,594	35,440	1,730	1,524	4.8	4.1
Technicians and related support	3,254	3,488	97	83	2.9	2.3
Sales occupations	13,207	13,575	764	726	5.5	5.1
Administrative support, including clerical	18,134	18,376	869	715	4.6	3.7
Service occupations	14,882	14,893	1,290	1,118	8.0	7.0
Private household	939	855	44	38	4.4	4.2
Protective service	1,897	1,855	67	75	3.4	3.9
Service, except private household and protective	12,046	12,183	1,179	1,005	8.9	7.6
Precision production, craft, and repair	13,145	13,307	1,033	970	7.3	6.8
Mechanics and repairers	4,429	4,511	200	188	4.3	4.0
Construction trades	4,746	4,758	592	546	11.1	10.3
Other precision production, craft, and repair	3,970	4,038	242	236	5.7	5.5
Operators, fabricators, and laborers	16,786	17,278	2,179	1,888	11.5	9.8
Machine operators, assemblers, and inspectors	7,732	7,986	869	708	10.1	8.1
Transportation and material moving occupations	4,534	4,673	459	440	9.2	8.6
Handlers, equipment cleaners, helpers, and laborers	4,519	4,610	851	742	15.8	13.9
Construction laborers	610	681	255	227	29.5	25.0
Other handlers, equipment cleaners, helpers, and laborers	3,909	3,929	596	515	13.2	11.6
Farming, forestry, and fishing	3,149	3,012	339	283	9.7	8.6

[1] Persons with no previous work experience and those whose last job was in the Armed Forces are included in the unemployed total.

Table A-12. Employment status of male Vietnam-era veterans and nonveterans by age, not seasonally adjusted

(Numbers in thousands)

Veteran status and age	Civilian noninstitutional population		Civilian labor force							
			Total		Employed		Unemployed			
							Number		Percent of labor force	
	Mar. 1987	Mar. 1988	Mar. 1987	Mar. 1988	Mar. 1987	Mar. 1988	Mar. 1987	Mar. 1988	Mar. 1987	Mar. 1988
VIETNAM-ERA VETERANS										
Total, 30 years and over	7,810	7,885	7,208	7,271	6,802	6,896	406	375	5.6	5.2
30 to 44 years	6,254	6,009	5,971	5,722	5,644	5,391	327	331	5.5	5.8
30 to 34 years	987	766	921	723	836	643	85	80	9.2	11.1
35 to 39 years	2,744	2,292	2,632	2,179	2,486	2,043	146	136	5.5	6.2
40 to 44 years	2,523	2,951	2,418	2,820	2,322	2,705	96	115	4.0	4.1
45 years and over	1,556	1,876	1,237	1,549	1,158	1,505	79	44	6.4	2.8
NONVETERANS										
Total, 30 to 44 years	19,150	20,129	18,104	18,892	17,082	17,988	1,022	904	5.6	4.8
30 to 34 years	8,711	8,991	8,288	8,470	7,823	8,024	465	446	5.6	5.3
35 to 39 years	6,100	6,673	5,774	6,273	5,428	5,988	346	285	6.0	4.5
40 to 44 years	4,339	4,465	4,042	4,149	3,831	3,976	211	173	5.2	4.2

NOTE: Male Vietnam-era veterans are men who served in the Armed Forces between August 5, 1964 and May 7, 1975. Nonveterans are men who have never served in the Armed Forces; published data are limited to those 30 to 44 years of age, the group that most closely corresponds to the bulk of the Vietnam-era veteran population.

Table A-13. Employment status of the civilian population for eleven large States

(Numbers in thousands)

State and employment status	Not seasonally adjusted[1]			Seasonally adjusted[2]					
	Mar. 1987	Feb. 1988	Mar. 1988	Mar. 1987	Nov. 1987	Dec. 1987	Jan. 1988	Feb. 1988	Mar. 1988
California									
Civilian noninstitutional population	20,389	20,824	20,860	20,389	20,714	20,751	20,787	20,824	20,860
Civilian labor force	13,597	13,975	13,958	13,619	13,912	13,950	13,981	14,032	13,976
Employed	12,739	13,164	13,218	12,799	13,172	13,221	13,267	13,279	13,272
Unemployed	858	812	740	820	740	729	714	753	704
Unemployment rate	6.3	5.8	5.3	6.0	5.3	5.2	5.1	5.4	5.0
Florida									
Civilian noninstitutional population	9,364	9,586	9,609	9,364	9,527	9,548	9,568	9,586	9,609
Civilian labor force	5,810	5,959	6,045	5,834	5,958	5,990	5,993	6,013	6,066
Employed	5,498	5,661	5,758	5,511	5,647	5,681	5,698	5,695	5,771
Unemployed	312	298	287	323	311	309	295	318	295
Unemployment rate	5.4	5.0	4.7	5.5	5.2	5.2	4.9	5.3	4.9
Illinois									
Civilian noninstitutional population	8,722	8,767	8,770	8,722	8,757	8,761	8,764	8,767	8,770
Civilian labor force	5,609	5,739	5,677	5,677	5,764	5,751	5,795	5,839	5,749
Employed	5,155	5,270	5,237	5,243	5,364	5,325	5,407	5,401	5,330
Unemployed	454	469	440	434	400	426	388	438	419
Unemployment rate	8.1	8.2	7.8	7.6	6.9	7.4	6.7	7.5	7.3
Massachusetts									
Civilian noninstitutional population	4,561	4,588	4,589	4,561	4,584	4,586	4,587	4,588	4,589
Civilian labor force	3,056	3,101	3,169	3,081	3,093	3,088	3,142	3,147	3,190
Employed	2,921	2,985	3,055	2,964	3,009	2,998	3,036	3,041	3,096
Unemployed	136	116	114	117	84	90	106	106	94
Unemployment rate	4.5	3.8	3.6	3.8	2.7	2.9	3.4	3.4	2.9
Michigan									
Civilian noninstitutional population	6,909	6,972	6,977	6,909	6,956	6,962	6,966	6,972	6,977
Civilian labor force	4,463	4,469	4,449	4,502	4,519	4,529	4,472	4,530	4,488
Employed	4,088	4,071	4,064	4,141	4,159	4,137	4,018	4,149	4,117
Unemployed	376	398	385	361	360	392	454	381	371
Unemployment rate	8.4	8.9	8.6	8.0	8.0	8.7	10.2	8.4	8.3
New Jersey									
Civilian noninstitutional population	5,989	6,027	6,029	5,989	6,018	6,021	6,024	6,027	6,029
Civilian labor force	3,965	3,970	3,976	3,975	3,994	4,005	4,037	3,991	3,985
Employed	3,795	3,810	3,803	3,820	3,847	3,848	3,884	3,855	3,826
Unemployed	170	161	173	155	147	157	153	136	159
Unemployment rate	4.3	4.0	4.4	3.9	3.7	3.9	3.8	3.4	4.0
New York									
Civilian noninstitutional population	13,745	13,769	13,770	13,745	13,766	13,767	13,768	13,769	13,770
Civilian labor force	8,437	8,426	8,427	8,472	8,553	8,512	8,524	8,505	8,465
Employed	7,987	8,054	8,064	8,063	8,112	8,127	8,120	8,172	8,142
Unemployed	449	372	362	409	441	385	404	333	323
Unemployment rate	5.3	4.4	4.3	4.8	5.2	4.5	4.7	3.9	3.8
North Carolina									
Civilian noninstitutional population	4,796	4,858	4,864	4,796	4,840	4,846	4,852	4,858	4,864
Civilian labor force	3,219	3,284	3,265	3,247	3,314	3,291	3,291	3,300	3,296
Employed	3,060	3,146	3,136	3,091	3,181	3,144	3,135	3,180	3,171
Unemployed	159	138	129	156	133	147	156	120	125
Unemployment rate	4.9	4.2	4.0	4.8	4.0	4.5	4.7	3.6	3.8
Ohio									
Civilian noninstitutional population	8,139	8,184	8,188	8,139	8,174	8,178	8,181	8,184	8,188
Civilian labor force	5,161	5,278	5,295	5,237	5,263	5,264	5,330	5,355	5,369
Employed	4,756	4,904	4,879	4,838	4,945	4,937	4,983	5,013	4,958
Unemployed	406	374	416	399	318	327	347	342	411
Unemployment rate	7.9	7.1	7.9	7.6	6.0	6.2	6.5	6.4	7.7

See footnotes at end of table.

Table A-13. Employment status of the civilian population for eleven large States—Continued

(Numbers in thousands)

State and employment status	Not seasonally adjusted[1]			Seasonally adjusted[2]					
	Mar. 1987	Feb. 1988	Mar. 1988	Mar. 1987	Nov. 1987	Dec. 1987	Jan. 1988	Feb. 1988	Mar. 1988
Pennsylvania									
Civilian noninstitutional population	9,277	9,312	9,314	9,277	9,305	9,307	9,309	9,312	9,314
Civilian labor force	5,450	5,653	5,617	5,564	5,709	5,780	5,827	5,786	5,725
Employed	5,110	5,319	5,304	5,243	5,394	5,457	5,497	5,486	5,435
Unemployed	340	334	314	321	315	323	330	300	290
Unemployment rate	6.2	5.9	5.6	5.8	5.5	5.6	5.7	5.2	5.1
Texas									
Civilian noninstitutional population	12,006	12,053	12,056	12,006	12,044	12,046	12,050	12,053	12,056
Civilian labor force	8,008	8,210	8,167	8,085	8,351	8,286	8,256	8,306	8,262
Employed	7,348	7,492	7,493	7,432	7,659	7,646	7,596	7,610	7,592
Unemployed	660	718	674	653	692	640	660	696	670
Unemployment rate	8.2	8.7	8.3	8.1	8.3	7.7	8.0	8.4	8.1

[1] These are the official Bureau of Labor Statistics' estimates used in the administration of Federal fund allocation programs.

[2] The population figures are not adjusted for seasonal variation; therefore, identical numbers appear in the unadjusted and the seasonally adjusted columns.

Table A-14. Persons not in the labor force by reason, sex, and race, quarterly averages

(In thousands)

Reason, sex, and race	Not seasonally adjusted		Seasonally adjusted				
	1987	1988	1987				1988
	I	I	I	II	III	IV	I
TOTAL							
Total not in labor force	63,994	64,087	62,851	62,901	62,963	62,890	62,825
Do not want a job now	58,063	58,442	56,983	57,006	57,490	57,408	57,414
Current activity: Going to school	8,096	8,012	6,394	6,403	6,368	6,414	6,325
Ill, disabled	4,187	4,329	4,111	4,193	4,426	4,467	4,254
Keeping house	26,168	25,277	26,182	25,550	25,646	25,513	25,289
Retired	15,828	16,798	15,872	16,250	16,317	16,508	16,862
Other activity	3,783	4,027	4,424	4,611	4,713	4,507	4,684
Want a job now	5,932	5,645	5,780	5,871	5,802	5,482	5,510
Reason not looking: School attendance	1,557	1,518	1,348	1,470	1,556	1,389	1,310
Ill health, disability	804	800	848	914	847	834	850
Home responsibilities	1,225	1,176	1,231	1,325	1,274	1,234	1,182
Think cannot get a job	1,217	1,099	1,135	1,048	992	910	1,027
Job-market factors[1]	805	738	762	694	635	581	700
Personal factors[2]	412	361	373	354	357	329	327
Other reasons[3]	1,130	1,053	1,218	1,114	1,132	1,094	1,141
Men							
Total not in labor force	21,181	21,629	20,486	20,681	20,811	20,845	20,856
Do not want a job now	19,114	19,602	18,459	18,585	18,945	18,878	18,987
Want a job now	2,068	2,026	1,994	2,082	2,064	1,918	1,871
Reason not looking: School attendance	767	736	661	750	773	737	633
Ill health, disability	377	369	406	463	416	414	406
Think cannot get a job	501	486	489	428	431	358	462
Other reasons[3]	422	433	456	421	444	409	471
Women							
Total not in labor force	42,813	42,458	42,365	42,220	42,152	42,055	41,970
Do not want a job now	38,949	38,840	38,524	38,423	38,545	38,530	38,417
Want a job now	3,864	3,618	3,786	3,809	3,738	3,545	3,539
Reason not looking: School attendance	790	782	687	720	784	653	677
Ill health, disability	427	431	440	451	431	421	444
Home responsibilities	1,225	1,176	1,231	1,325	1,274	1,234	1,182
Think cannot get a job	716	611	666	619	581	552	566
Other reasons	707	620	762	693	668	685	670
White							
Total not in labor force	54,566	54,470	53,658	53,627	53,771	53,679	53,456
Do not want a job now	50,290	50,394	49,437	49,284	49,536	49,664	49,536
Want a job now	4,275	4,077	4,198	4,344	4,252	4,045	4,020
Reason not looking: School attendance	1,058	1,060	951	1,083	1,082	966	945
Ill health, disability	579	604	617	683	648	646	644
Home responsibilities	912	837	912	959	948	909	837
Think cannot get a job	843	756	771	714	643	620	697
Other reasons[3]	863	830	946	896	951	964	897
Black							
Total not in labor force	7,571	7,613	7,367	7,457	7,326	7,294	7,406
Do not want a job now	6,116	6,249	5,962	6,169	6,088	6,083	6,094
Want a job now	1,454	1,366	1,402	1,294	1,237	1,210	1,320
Reason not looking: School attendance	414	423	346	315	333	341	351
Ill health, disability	208	169	225	193	166	165	195
Home responsibilities	289	306	291	313	275	304	310
Think cannot get a job	344	283	327	298	315	237	266
Other reasons[3]	198	184	212	175	145	163	198

---

[1] Job-market factors include "could not find job" and "thinks no job available."

[2] Personal factors include "employers think too young or old," "lacks education or training," and "other personal handicap."

[3] Includes small number of men not looking for work because of "home responsibilities."

Table B-1. Employees on nonagricultural payrolls by industry

(In thousands)

Industry	Not seasonally adjusted				Seasonally adjusted					
	Mar. 1987	Jan. 1988	Feb. 1988 p	Mar. 1988 p	Mar. 1987	Nov. 1987	Dec. 1987	Jan. 1988	Feb. 1988 p	Mar. 1988 p
Total	100,462	102,388	102,951	103,698	101,329	103,285	103,612	103,827	104,344	104,606
Total private	83,152	85,136	85,376	86,009	84,352	86,072	86,341	86,560	87,040	87,253
Goods-producing	24,214	24,639	24,662	24,871	24,749	25,169	25,259	25,295	25,342	25,426
Mining	718	744	743	750	722	759	756	746	749	755
Oil and gas extraction	408.5	430.0	436.1	437.8	408	439	436	430	432	437
Construction	4,599	4,643	4,632	4,802	5,032	5,074	5,121	5,050	5,175	5,254
General building contractors	1,196.4	1,214.1	1,196.4	1,221.0	1,291	1,280	1,290	1,303	1,322	1,321
Manufacturing	18,897	19,252	19,287	19,319	18,995	19,336	19,382	19,401	19,418	19,417
Production workers	12,846	13,122	13,164	13,199	12,925	13,197	13,241	13,250	13,277	13,272
Durable goods	11,145	11,337	11,354	11,383	11,176	11,367	11,403	11,403	11,412	11,414
Production workers	7,382	7,538	7,561	7,593	7,399	7,568	7,597	7,588	7,606	7,606
Lumber and wood products	713.5	726.5	727.8	726.0	734	750	753	753	751	748
Furniture and fixtures	503.2	534.0	532.1	531.2	502	526	530	533	531	530
Stone, clay, and glass products	569.9	564.7	563.1	571.2	586	588	590	585	588	587
Primary metal industries	742.2	768.7	771.4	772.5	739	771	771	768	770	769
Blast furnaces and basic steel products	267.0	284.5	285.2	284.0	266	287	285	284	285	283
Fabricated metal products	1,414.5	1,445.9	1,447.7	1,451.3	1,419	1,446	1,451	1,452	1,455	1,456
Machinery, except electrical	2,035.1	2,097.1	2,106.1	2,122.8	2,015	2,074	2,085	2,097	2,103	2,112
Electrical and electronic equipment	2,092.6	2,120.1	2,123.3	2,124.9	2,099	2,110	2,120	2,130	2,128	2,131
Transportation equipment	2,025.8	2,003.2	2,006.8	2,003.9	2,022	2,016	2,010	2,005	2,001	2,000
Motor vehicles and equipment	857.2	814.5	819.3	824.9	854	835	832	820	818	822
Instruments and related products	694.3	701.0	703.0	703.3	694	701	701	702	704	703
Miscellaneous manufacturing	363.8	367.8	372.9	375.5	366	377	376	378	380	378
Nondurable goods	7,752	7,915	7,933	7,936	7,819	7,969	7,979	7,998	8,006	8,003
Production workers	5,464	5,584	5,603	5,606	5,526	5,629	5,644	5,662	5,671	5,666
Food and kindred products	1,576.2	1,607.9	1,601.6	1,593.0	1,635	1,645	1,645	1,661	1,660	1,653
Tobacco manufactures	55.5	58.6	56.2	53.6	57	56	56	57	56	55
Textile mill products	722.1	733.1	734.3	733.2	725	730	739	736	738	736
Apparel and other textile products	1,105.2	1,108.4	1,117.5	1,117.2	1,103	1,120	1,121	1,117	1,115	1,115
Paper and allied products	675.0	677.6	677.7	677.5	678	680	681	681	682	681
Printing and publishing	1,486.5	1,528.7	1,530.1	1,544.4	1,485	1,522	1,525	1,530	1,538	1,543
Chemicals and allied products	1,015.5	1,041.6	1,045.7	1,051.2	1,017	1,041	1,047	1,048	1,050	1,052
Petroleum and coal products	162.0	163.2	162.8	163.9	164	167	167	167	166	166
Rubber and miscellaneous plastics products	807.6	843.6	846.4	848.6	807	840	845	847	847	848
Leather and leather products	146.4	152.3	152.8	153.0	148	152	153	154	154	154
Service-producing	76,248	77,749	78,289	78,827	76,580	78,116	78,353	78,532	79,002	79,180
Transportation and public utilities	5,275	5,425	5,438	5,462	5,333	5,459	5,473	5,485	5,504	5,522
Transportation	3,065	3,195	3,206	3,227	3,112	3,218	3,233	3,244	3,261	3,276
Communication and public utilities	2,210	2,230	2,232	2,235	2,221	2,241	2,240	2,241	2,243	2,246
Wholesale trade	5,725	5,843	5,853	5,878	5,766	5,851	5,871	5,884	5,903	5,920
Durable goods	3,380	3,464	3,473	3,492	3,397	3,456	3,473	3,481	3,494	3,510
Nondurable goods	2,345	2,379	2,380	2,386	2,369	2,395	2,398	2,403	2,409	2,410
Retail trade	17,737	18,340	18,215	18,312	18,136	18,443	18,458	18,619	18,720	18,724
General merchandise stores	2,278.5	2,544.4	2,444.6	2,408.0	2,380	2,454	2,453	2,490	2,533	2,503
Food stores	2,906.0	3,006.9	3,004.4	3,008.7	2,944	2,982	2,996	3,019	3,032	3,045
Automotive dealers and service stations	1,958.0	2,002.9	2,011.2	2,034.4	1,979	2,003	2,013	2,023	2,048	2,055
Eating and drinking places	5,789.3	5,797.5	5,833.1	5,943.4	5,984	6,047	6,064	6,083	6,097	6,115
Finance, insurance, and real estate	6,478	6,626	6,623	6,644	6,526	6,657	6,668	6,684	6,687	6,694
Finance	3,246	3,296	3,284	3,285	3,256	3,301	3,301	3,309	3,301	3,295
Insurance	2,020	2,082	2,091	2,094	2,022	2,069	2,082	2,086	2,093	2,096
Real estate	1,212	1,248	1,248	1,265	1,248	1,287	1,285	1,289	1,293	1,303
Services	23,723	24,263	24,585	24,842	23,842	24,493	24,612	24,603	24,884	24,967
Business services	4,963.9	5,154.5	5,208.2	5,251.3	5,020	5,195	5,217	5,220	5,290	5,310
Health services	6,762.1	7,071.1	7,109.5	7,149.5	6,773	7,023	7,063	7,085	7,131	7,157
Government	17,310	17,252	17,575	17,689	16,977	17,213	17,271	17,267	17,304	17,353
Federal	2,916	2,953	2,958	2,966	2,922	2,977	2,981	2,977	2,979	2,972
State	4,036	3,964	4,100	4,123	3,930	3,978	3,996	3,996	4,004	4,019
Local	10,358	10,335	10,517	10,600	10,125	10,258	10,294	10,294	10,321	10,362

p = preliminary

Table B-2. Average weekly hours of production or nonsupervisory workers[1] on private nonagricultural payrolls by industry

Industry	Not seasonally adjusted				Seasonally adjusted					
	Mar. 1987	Jan. 1988	Feb. 1988 p	Mar. 1988 p	Mar. 1987	Nov. 1987	Dec. 1987	Jan. 1988	Feb. 1988 p	Mar. 1988 p
Total private	34.6	34.4	34.5	34.4	34.8	34.9	34.6	34.9	34.8	34.6
Mining	41.8	41.9	41.5	41.1	(2)	(2)	(2)	(2)	(2)	(2)
Construction	37.4	36.0	36.2	37.6	(2)	(2)	(2)	(2)	(2)	(2)
Manufacturing	40.9	41.0	40.7	40.9	40.9	41.2	41.0	41.2	41.0	40.9
Overtime hours	3.6	3.8	3.6	3.6	3.6	3.9	3.8	3.9	3.7	3.7
Durable goods	41.6	41.6	41.3	41.6	41.5	41.9	41.5	41.7	41.5	41.5
Overtime hours	3.7	3.9	3.7	3.8	3.7	4.0	3.9	4.3	3.8	3.8
Lumber and wood products	40.7	39.5	39.8	39.8	40.9	40.8	40.4	40.1	40.4	40.0
Furniture and fixtures	39.8	39.0	38.8	38.8	40.0	40.0	39.8	39.4	39.5	39.0
Stone, clay, and glass products	42.0	40.9	41.2	42.1	42.5	42.5	42.5	42.0	42.3	42.6
Primary metal industries	42.8	43.5	43.3	43.5	42.6	43.7	43.6	43.5	43.2	43.3
Blast furnaces and basic steel products	42.6	43.8	44.2	44.0	42.3	44.0	44.3	44.0	44.0	43.8
Fabricated metal products	41.5	41.8	41.2	41.5	41.5	42.1	41.7	41.9	41.4	41.5
Machinery, except electrical	42.2	42.8	42.5	42.6	42.0	42.7	42.5	42.8	42.6	42.4
Electrical and electronic equipment	40.9	41.3	40.7	41.1	40.9	41.0	40.9	41.2	40.9	41.1
Transportation equipment	42.6	42.5	41.9	42.3	42.3	42.4	41.4	42.3	42.0	42.0
Motor vehicles and equipment	43.2	42.7	42.3	42.9	42.9	43.1	41.4	42.4	42.5	42.6
Instruments and related products	41.5	41.9	41.3	41.5	41.3	41.7	41.3	41.9	41.3	41.2
Miscellaneous manufacturing	39.3	38.9	38.8	38.9	(2)	(2)	(2)	(2)	(2)	(2)
Nondurable goods	40.0	40.2	39.9	40.0	40.1	40.4	40.3	40.4	40.2	40.1
Overtime hours	3.4	3.6	3.4	3.4	3.5	3.8	3.7	3.8	3.6	3.5
Food and kindred products	39.5	40.6	39.7	39.7	40.0	40.6	40.6	40.8	40.4	40.2
Tobacco manufactures	38.1	39.2	38.3	36.9	(2)	(2)	(2)	(2)	(2)	(2)
Textile mill products	42.0	41.5	41.3	41.1	42.1	41.8	41.7	41.7	41.7	41.3
Apparel and other textile products	37.0	36.7	36.7	37.0	37.0	37.1	37.2	36.9	37.0	37.0
Paper and allied products	42.9	43.6	43.0	43.2	43.0	43.5	43.2	43.6	43.3	43.3
Printing and publishing	38.0	37.7	37.7	38.2	37.9	38.0	37.9	38.0	38.0	38.1
Chemicals and allied products	42.1	42.7	42.4	42.6	42.0	42.7	42.7	42.7	42.5	42.5
Petroleum and coal products	43.9	43.9	42.8	43.4	44.1	43.6	44.3	44.2	43.4	43.5
Rubber and miscellaneous plastics products	41.5	41.8	41.4	41.7	(2)	(2)	(2)	(2)	(2)	(2)
Leather and leather products	37.5	37.7	36.9	37.6	(2)	(2)	(2)	(2)	(2)	(2)
Transportation and public utilities	38.9	38.9	38.8	38.6	39.0	39.1	39.0	39.4	39.0	38.6
Wholesale trade	37.9	38.0	38.0	37.8	38.1	38.3	38.1	38.2	38.3	38.0
Retail trade	28.9	28.4	28.5	28.6	29.3	29.2	28.8	29.0	29.1	28.9
Finance, insurance, and real estate	36.3	36.3	36.4	35.7	(2)	(2)	(2)	(2)	(2)	(2)
Services	32.4	32.4	32.6	32.3	32.5	32.6	32.4	32.6	32.8	32.4

---

[1] Data relate to production workers in mining and manufacturing; to construction workers in construction; and to nonsupervisory workers in transportation and public utilities; wholesale and retail trade; finance, insurance, and real estate; and services. These groups account for approximately four-fifths of the total employees on private nonagricultural payrolls.

[2] This series is not published seasonally adjusted since the seasonal component is small relative to the trend-cycle and/or irregular components and consequently cannot be separated with sufficient precision.

p = preliminary.

Table B-3. Average hourly and weekly earnings of production or nonsupervisory workers[1] on private nonagricultural payrolls by industry

Industry	Average hourly earnings				Average weekly earnings			
	Mar. 1987	Jan. 1988	Feb. 1988 p	Mar. 1988 p	Mar. 1987	Jan. 1988	Feb. 1988 p	Mar. 1988 p
Total private	$8.92	$9.18	$9.18	$9.20	$308.63	$315.79	$316.71	$316.48
Seasonally adjusted	8.91	9.15	9.13	9.19	310.07	318.42	317.72	317.97
Mining	12.51	12.69	12.62	12.58	522.92	531.71	523.73	517.04
Construction	12.59	12.93	12.76	12.82	470.87	465.48	461.91	482.03
Manufacturing	9.85	10.07	10.06	10.08	402.87	412.87	409.44	412.27
Durable goods	10.39	10.62	10.61	10.63	432.22	441.79	438.19	442.21
Lumber and wood products	8.28	8.52	8.53	8.47	337.00	336.54	339.49	337.11
Furniture and fixtures	7.58	7.82	7.76	7.80	301.68	304.98	301.09	302.64
Stone, clay, and glass products	10.13	10.37	10.35	10.36	425.46	424.13	426.42	436.16
Primary metal industries	11.82	12.10	12.08	12.12	505.90	526.35	523.06	527.22
Blast furnaces and basic steel products	13.66	13.92	13.98	13.99	581.92	609.70	617.92	615.56
Fabricated metal products	9.99	10.17	10.17	10.19	414.59	425.11	419.00	422.89
Machinery, except electrical	10.72	10.92	10.88	10.91	452.38	467.38	462.40	464.77
Electrical and electronic equipment	9.84	10.03	10.04	10.09	402.46	414.24	408.63	414.70
Transportation equipment	12.86	13.19	13.20	13.25	547.84	560.58	553.08	560.48
Motor vehicles and equipment	13.49	13.90	13.92	14.03	582.77	593.53	588.82	601.89
Instruments and related products	9.67	9.97	9.98	9.93	401.31	417.74	412.17	412.10
Miscellaneous manufacturing	7.66	7.97	7.90	7.92	301.04	310.03	306.52	308.89
Nondurable goods	9.09	9.30	9.29	9.31	363.60	373.86	370.67	372.40
Food and kindred products	8.93	9.05	9.05	9.06	352.74	367.43	359.29	359.68
Tobacco manufactures	13.80	13.70	13.89	14.15	525.78	537.04	531.99	522.14
Textile mill products	7.12	7.36	7.32	7.34	[illegible]	305.44	302.32	301.67
Apparel and other textile products	5.93	6.04	6.02	6.04	[illegible]	221.67	220.93	223.48
Paper and allied products	11.27	11.52	11.49	11.49	[illegible]	502.27	494.07	496.37
Printing and publishing	10.17	10.39	10.41	10.42	386.46	391.70	392.46	398.04
Chemicals and allied products	12.24	12.56	12.54	12.52	515.30	536.31	531.70	533.35
Petroleum and coal products	14.50	14.83	14.94	15.03	636.55	651.04	639.43	652.30
Rubber and miscellaneous plastics products	8.80	8.97	8.97	8.98	365.20	374.95	371.36	374.47
Leather and leather products	6.06	6.10	6.14	6.16	227.25	229.97	226.57	231.62
Transportation and public utilities	11.90	12.11	12.17	12.16	462.91	471.08	472.20	469.38
Wholesale trade	9.53	9.79	9.80	9.82	361.19	372.02	372.40	371.20
Retail trade	6.08	6.25	6.24	6.25	175.71	177.50	177.84	178.75
Finance, insurance, and real estate	8.72	9.00	9.07	9.04	316.54	326.70	330.15	322.73
Services	8.41	8.79	8.79	8.80	272.48	284.80	286.55	284.24

[1] See footnote 1, table B-2.

p = preliminary.

Table B-4. Hourly Earnings Index for production or nonsupervisory workers[1] on private nonagricultural payrolls by industry

(1977 = 100)

Industry	Not seasonally adjusted					Seasonally adjusted						
	Mar. 1987	Jan. 1988	Feb. 1988p	Mar. 1988p	Percent change from: Mar. 1987- Mar. 1988	Mar. 1987	Nov. 1987	Dec. 1987	Jan. 1988	Feb. 1988p	Mar. 1988p	Percent change from: Feb. 1988- Mar. 1988
Total private nonfarm:												
Current dollars	172.3	176.8	177.0	177.3	2.9	172.2	175.8	175.7	176.4	176.5	177.1	0.4
Constant (1977) dollars	94.6	94.1	94.0	N.A.	(2)	94.4	93.8	93.6	93.7	93.6	N.A.	(3)
Mining	181.4	185.0	184.9	184.8	1.9	(4)	(4)	(4)	(4)	(4)	(4)	(4)
Construction	153.0	156.9	155.2	156.0	2.0	153.8	156.6	154.6	157.1	155.8	156.8	.6
Manufacturing	174.6	177.5	177.8	178.1	2.0	174.3	176.6	176.9	176.9	177.5	177.8	.2
Transportation and public utilities	174.4	177.2	178.4	178.3	2.2	174.6	177.1	177.4	176.9	177.7	178.4	.4
Wholesale trade	175.8	180.3	180.5	181.0	3.0	(4)	(4)	(4)	(4)	(4)	(4)	(4)
Retail trade	159.4	163.1	163.3	163.8	2.7	159.0	162.3	162.7	163.1	162.8	163.3	.3
Finance, insurance, and real estate	187.0	193.8	195.2	194.8	4.2	(4)	(4)	(4)	(4)	(4)	(4)	(4)
Services	179.3	187.3	187.3	187.6	4.6	179.0	185.2	185.1	185.4	186.0	187.3	.7

1 See footnote 1, table B-2.
2 Change is -1.1 percent from February 1987 to February 1988, the latest month available.
3 Change is -.1 percent from January 1988 to February 1988, the latest month available.
4 These series are not seasonally adjusted since the seasonal component is small relative to the trend-cycle and/or irregular components and consequently cannot be separated with sufficient precision.
N.A. Data not available.
p = preliminary.

Table B-5. Indexes of aggregate weekly hours of production or nonsupervisory workers[1] on private nonagricultural payrolls by industry

(1977 = 100)

Industry	Not seasonally adjusted				Seasonally adjusted					
	Mar. 1987	Jan. 1988	Feb. 1988 p	Mar. 1988 p	Mar. 1987	Nov. 1987	Dec. 1987	Jan. 1988	Feb. 1988 p	Mar. 1988 p
Total	116.9	119.0	119.5	120.3	119.6	122.2	121.8	122.4	121.4	122.3
Goods-producing	95.9	97.3	96.8	99.0	98.9	101.4	101.6	100.6	101.5	102.1
Mining	78.8	83.3	82.7	82.5	80.0	86.4	85.9	82.7	83.6	83.6
Construction	119.4	115.2	115.5	125.3	135.5	134.1	138.5	130.5	137.2	142.1
Manufacturing	92.2	94.4	93.9	94.7	92.8	95.4	95.2	95.6	95.4	95.3
Durable goods	90.2	92.2	91.6	92.6	90.2	93.0	92.6	93.0	92.8	92.7
Lumber and wood products	98.7	97.2	98.0	97.9	102.5	104.2	103.7	102.6	103.5	101.7
Furniture and fixtures	107.8	112.1	111.0	110.9	107.9	113.3	113.5	112.6	112.6	111.2
Stone, clay, and glass products	83.7	80.7	81.2	84.3	87.5	88.1	88.7	86.7	87.5	88.1
Primary metal industries	62.6	66.0	66.9	67.5	61.9	67.3	67.1	66.6	66.5	66.7
Blast furnaces and basic steel products	49.6	54.5	55.3	55.1	47.7	55.9	55.1	54.8	55.3	54.9
Fabricated metal products	88.6	91.4	90.4	91.5	88.9	92.2	91.7	92.2	91.4	91.7
Machinery, except electrical	85.8	91.5	91.2	92.7	84.7	90.1	90.1	91.3	91.1	91.4
Electrical and electronic equipment	99.9	103.7	101.9	103.1	99.9	102.0	102.7	103.1	102.5	103.2
Transportation equipment	99.6	96.9	96.0	96.6	98.2	97.3	94.9	96.4	95.6	95.3
Motor vehicles and equipment	89.2	84.0	83.8	85.6	88.0	86.7	83.0	83.8	83.9	84.2
Instruments and related products	102.6	105.6	104.6	105.7	101.7	104.6	103.6	105.7	105.0	104.7
Miscellaneous manufacturing	80.1	79.3	80.9	81.4	81.1	82.5	82.0	82.8	83.9	82.1
Nondurable goods	95.2	97.8	97.3	97.7	96.5	99.0	99.2	99.6	99.3	99.1
Food and kindred products	93.6	98.4	95.9	95.1	99.4	101.4	101.4	103.2	102.3	101.2
Tobacco manufactures	73.5	81.0	75.1	67.4	77.7	75.4	78.5	78.9	76.7	70.1
Textile mill products	82.3	82.6	82.5	81.9	82.9	83.8	83.6	83.3	83.7	82.9
Apparel and other textile products	85.6	85.0	85.9	86.7	85.3	87.6	87.3	86.4	86.5	86.3
Paper and allied products	99.1	100.8	99.8	100.3	99.7	101.0	100.5	101.5	101.2	101.2
Printing and publishing	129.8	133.0	134.1	136.4	129.4	133.0	133.1	134.4	135.3	136.1
Chemicals and allied products	93.3	97.1	97.1	98.3	93.1	97.0	97.8	97.8	97.5	97.9
Petroleum and coal products	81.3	82.7	80.6	82.6	83.3	83.9	86.9	85.9	84.3	84.5
Rubber and miscellaneous plastics products	113.8	120.0	119.1	120.4	113.5	119.3	119.8	120.2	119.4	119.7
Leather and leather products	56.6	59.1	57.9	59.2	57.8	60.2	60.2	60.2	59.7	60.3
Service-producing	128.5	131.0	132.1	132.1	131.0	133.6	133.0	134.4	135.5	134.4
Transportation and public utilities	106.2	109.1	109.3	109.4	107.7	110.7	110.5	112.0	111.2	110.5
Wholesale trade	115.4	117.9	118.0	118.2	116.9	119.0	118.8	119.6	120.3	119.9
Retail trade	115.7	117.4	117.1	117.9	120.3	121.6	120.1	122.0	123.0	122.0
Finance, insurance, and real estate	139.9	141.4	141.7	139.2	141.5	142.9	141.1	143.1	143.0	140.7
Services	148.6	152.0	155.1	155.0	150.2	154.6	154.5	155.7	157.9	156.6

[1] See footnote 1, table B-2.

p = preliminary.

Table B-6. Indexes of diffusion: Percent of industries in which employment[1] increased

Time span	Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Over 1-month span	1986	53.2	48.1	48.1	53.5	52.4	46.8	52.4	56.2	55.1	53.2	59.7	59.7
	1987	53.5	56.8	58.6	58.4	58.6	55.7	68.6	54.6	65.4	65.4	71.9	63.2
	1988	60.0	p62.2	p55.7									
Over 3-month span	1986	49.7	44.9	45.7	48.4	47.8	45.4	48.4	55.1	55.9	58.1	58.6	60.3
	1987	58.6	59.5	61.1	61.6	61.4	67.3	66.2	75.1	69.7	77.8	75.9	79.5
	1988	p67.6	p66.1										
Over 6-month span	1986	47.6	47.6	43.0	43.2	45.4	49.4	47.3	53.5	59.2	58.9	57.8	58.9
	1987	61.9	62.7	58.9	67.3	67.6	71.1	76.2	78.6	80.3	75.7	p77.6	p74.1
	1988												
Over 12-month span	1986	43.2	44.1	46.2	45.7	47.9	49.5	49.5	51.6	54.9	52.2	55.1	56.5
	1987	62.2	63.5	57.3	69.9	73.8	72.6	76.2	p77.3	p77.3			
	1988												

[1] Number of employees, seasonally adjusted for 1, 3, and 6 month spans, on payrolls of 185 private nonagricultural industries. Data for the 12-month span are unadjusted.

p = preliminary.

NOTE: Figures are the percent of industries with employment rising. (Half of the unchanged components are counted as rising.) Data are centered within the spans.

Senator SARBANES. Thank you very much, Commissioner.

To lead off, I wanted to pursue the discouraged worker data. You submit that on a quarterly basis, as I understand it.

Mrs. NORWOOD. Yes.

Senator SARBANES. There are about a million persons in that status?

Mrs. NORWOOD. Yes.

Senator SARBANES. These are people so discouraged they are not even looking for work, is that correct?

Mrs. NORWOOD. That's right.

Senator SARBANES. And how does that compare historically, particularly at this point in a recovery?

Mrs. NORWOOD. The level is rather high, and that's because during the 1981-82 recession discouragement rose considerably. It has come down since then, but the level is still quite high by historical standards.

Senator SARBANES. By what factor is it higher than historical standards?

Mrs. NORWOOD. Maybe Mr. Plewes can answer that.

Mr. PLEWES. In previous times with a comparable unemployment rate, it's gotten down to the range of about 600,000 to 800,000. However, the population has grown considerably, so that even under the same conditions you would naturally have more discouraged workers now than in the past.

Mrs. NORWOOD. I am glad we clarified that.

Senator SARBANES. So it's quite significant, in other words, in percentage terms?

Mr. PLEWES. Yes.

Senator SARBANES. Your explanation for it is simply that the number rose so steeply in the 1981-82 recession that it just hasn't been able to work its way down 7 years later?

Mrs. NORWOOD. Well, I think that's one important element. The other element is that the discouraged are disproportionately made up of blacks and females, particularly those with limited training and who increasingly have difficulty in the labor market, particularly with the restructuring of industry and of occupations that is going on.

Senator SARBANES. Now the unemployment rate for men and women has obviously fallen over the last year, since the overall rate has fallen, but as I understand it, the rate has fallen more substantially for adult men than adult women. Is that correct?

Mrs. NORWOOD. Well, the rate was much higher for adult men during the recession, and in the recovery there has been more of a reduction from that higher rate. That's been an unusual situation.

Senator SARBANES. Well, let me take it a year ago. A year ago, I think the rate was about the same, wasn't it, for adult men and adult women?

Mrs. NORWOOD. That's right.

Senator SARBANES. It was the same I think.

Mrs. NORWOOD. Yes. And they are both about the same now, 4.9 for adult men and 4.8 for adult women.

Senator SARBANES. All right. Now for some reason I thought the women's figure was higher than that.

Mrs. **Norwood**. The rate for women came down this month from 5.2 to 4.8.

Senator **Sarbanes**. What do you attribute that to? That's quite a significant 1-month move, is it not?

Mrs. **Norwood**. The women are doing better in the labor market. As you know, the unemployment rate for women always used to be much higher than the rate for men. That situation was reversed during the recession and now the two rates seem to have come together. I don't have any particular information on that, however.

Senator **Sarbanes**. Now, is the slowdown in the increase in the labor force attributable to demographics? Is that the cause?

Mrs. **Norwood**. I think the overall slowdown in the rate of labor force growth—that is over recent years—is clearly due to demographics. The slowdown in the labor force this particular month—that is from February to March—is more probably merely a catching up of the survey because we had in January a very high rate of labor force increase and the survey measure of labor force to move in fits and starts.

Overall, however, we are seeing many fewer teenagers. That was particularly true over the last couple of years. That's beginning to turn around, but not by very large numbers. And as you recall, in the 1960's in particular, when the baby boom generation begin entering the labor force, we used to have upwards of 3 to 3.2 to 3.3 million people coming into the labor force each year. We had less than 2 million this year.

Senator **Sarbanes**. And that difference is demographics, that difference; is that correct?

Mrs. **Norwood**. Yes.

Senator **Sarbanes**. Between 3.2 and less than 2 million?

Mrs. **Norwood**. Yes, that's correct, because labor force participation is still quite high. It's higher than it used to be. So it is the demographics. There are just fewer youngsters and that, of course, helps to keep the unemployment rate from rising because youngsters always have a very much higher unemployment rate than older people.

Senator **Sarbanes**. Does the Bureau have any figures on how much the GNP would have to grow in order to keep the unemployment rate constant?

Mrs. **Norwood**. We have not done any work on that ourselves, Senator. We are aware of the view that is ascribed to Arthur Okun that there is a relationship and that the job creation really needs to be quite high, but we have not done any work. We have nothing specific to offer on that. That was 300,000 to 1 percent on the unemployment rate.

Senator **Sarbanes**. What was that figure again?

Mrs. **Norwood**. That's the generally used figure, a 300,000 increase in employment would reduce the unemployment rate—or——

Mr. **Plewes**. A 1-percent increase in GNP is needed to reduce unemployment by 300,000. That is the historic formula.

Senator **Sarbanes**. A 1-percent increase in the GNP.

Mrs. **Norwood**. Yes.

Senator **Sarbanes**. That would provide 300,000 jobs or decrease unemployment by 300,000?

Mr. **Plewes**. It would reduce unemployment by 300,000, all things equal, sir.

Mrs. **Norwood**. Anyhow, the specific formula was later revised.

Senator **Sarbanes**. Let me point this out. In the last year the economy grew——

Mrs. **Norwood**. Three percent and one percent. That's the ratio.

Senator **Sarbanes**. Well, the economy grew between the last quarter of 1986 and the last quarter of 1987 by 3.9 percent. Is that correct?

Mrs. **Norwood**. Yes.

Senator **Sarbanes**. And during that time the unemployment rate fell from 6.8 to 5.9 percent.

Mrs. **Norwood**. There are those who say that if you really read Okun he didn't say exactly that—but in any case, it's purported that his "law" is that you need a 3-percent increase in the GNP to reduce the unemployment rate by a point.

And I would argue—and the reason that I am a little rusty on the exact figure is that I think conditions have changed a great deal and I'm not sure that the relationships that he observed are at all present today. Relationships have changed and our industry has been restructured. Our occupational distribution is different. Our demographics are different. And I think that those relationships really need to be looked at again.

Senator **Sarbanes**. Well, it's being suggested that GNP will grow this year at about 2 percent.

Mrs. **Norwood**. Yes.

Senator **Sarbanes**. Depending upon whose predictions you're taking. In fact, the blue chip indicators are at 1.8 percent. The administration is at 2.4 percent. But if one assumed about a 2-percent growth, what would the implications of that be for the unemployment situation?

Mrs. **Norwood**. I think the implications of that are that it would be extraordinarily difficult to get the unemployment rate down and it might be difficult to keep the unemployment rate from rising.

Senator **Sarbanes**. At a 2-percent growth?

Mrs. **Norwood**. At a 2-percent growth.

Senator **Sarbanes**. Well, I'll come back on my second round to some other questions, but I'll turn now to Senator Proxmire.

Senator **Proxmire**. Mrs. Norwood, as I indicated, in the last two lines of your statement you said that factory jobs showed no increase and closed out a relatively weak first quarter for the industry.

Mrs. **Norwood**. Yes.

Senator **Proxmire**. The fact that the manufacturing didn't show an increase after weak growth in January and February seems inconsistent with the data that show a steadily declining rate of unemployment and with other data indicating that exports are growing and that the trade deficit is declining and the value of the dollar is still down.

Are these figures really inconsistent or is there some employment growth occurring in the export industry counterbalanced by a dropoff in employment in domestic manufacturing?

Mrs. **Norwood**. The numbers are entirely consistent, I believe, with the other sets of data that we see. There was an increase, for example, in nonelectrical machinery, an increase of 10,000 jobs. There was an increase in printing and publishing, which has been doing extraordinarily well. We even had an increase in motor vehicles and equipment as auto sales have begun to go up a bit.

I think that we are seeing that some industries, particularly those related to housing, which did not do very well over the last quarter, have not been hiring people. They have in fact been reducing their work force—after seasonal adjustment, of course.

Senator PROXMIRE. But construction is strong.

Mrs. NORWOOD. Now. It often takes a little while for the effects to work through the economy.

Senator PROXMIRE. Shouldn't that be reflected in the March figures?

Mrs. NORWOOD. No, not yet. I think that the April figures might perhaps reflect that.

The other point that should be made is that our productivity in manufacturing is holding up extraordinarily well and the fact that we are not increasing the workers on company payrolls does not necessarily mean that our production is being reduced.

And it may well be that we have entered a new phase and that we need to be interpreting employment change a little bit differently. It may be that we have rationalized our industry more than we had thought. It seems clear that employers are more cautious about hiring people and keeping them on payrolls because they recognize that labor costs are quite high. So they are trying to find ways to produce with a very lean company labor force.

Senator PROXMIRE. Senator Sarbanes and I have both touched on the discouraged workers element. I still haven't gotten an explanation—maybe there isn't one—as to why it is that the number of discouraged workers actually went up. It's increased by 100,000 during the first quarter of 1988, which as I say is about a 10-percent increase. These are people who have just given up hope. They want work but they're not going to go out and look for it because they figure they can't find the jobs.

How can we explain that in a situation where unemployment is falling?

Mrs. NORWOOD. Well, one explanation might be that many of these people recognize that the kinds of jobs that are out there require training that they don't have. Many of them may not be located in the same geographic areas as the jobs are.

Also, we should recognize that data on discouragement are rather weak in a sense because they rely on a state of mind. It is not like asking something specific such as whether you have looked for work. You either did or you didn't. In the case of discouragement, we ask people who are out of the labor force whether they want a job and then why they didn't look for a job, and that is not very hard data. It's rather soft. So we can't be too sure about the specific estimate. But I would say that this is a fairly high level.

Senator SARBANES. Would you yield for a moment?

Senator PROXMIRE. Yes, indeed.

Senator SARBANES. Isn't it very unusual for the number of discouraged workers to go up when the unemployment rate is going down?

Mrs. NORWOOD. You usually do not see that happening. One question, of course, is whether this change will be sustained. Those numbers have jumped around a little and I'm not sure that over the next quarter we will see the same thing. Do you have something to add, Mr. Plewes?

Mr. PLEWES. I just do remind you that the number is down over the year, but it's gone up this quarter. We ought to take a look at another quarter to find out if this is a permanent change.

Senator SARBANES. But you're surprised at that, aren't you? The number of discouraged workers going up, when the recovery has continued and the unemployment rate has gone down, was a surprising figure?

Mrs. NORWOOD. Yes, of course.

Senator PROXMIRE. The statistical breakdown you have under household data shows that you ask a series of questions—ill health, disability, home responsibilities, they cannot get a job, and so forth. I think "they cannot get a job" is the factor that goes up most sharply. It just focuses on that particular response, which indicates that they think there's no job available in the particular area in which they're qualified to work.

Mrs. NORWOOD. Well, we don't really know why people feel the way they feel. There are people who say, "Well, I don't think there's any job available at the salary that I would want to have," or "There isn't a job available with the kind of hours of work that I would want." There are a whole lot of reasons for discouragement.

We really don't have very much information on what makes people come into or leave the labor force. A lot of this may be wage related. A lot of it may be related to the kinds of jobs. And some of it may just be plain discouragement.

Senator PROXMIRE. Then I'm concerned about table A of your statistical data, a very helpful table, which shows a change between February and March for women, which is pretty spectacular. In other words, the unemployment for women dropped from 5.2 to 4.8 percent. For men it remains exactly the same.

Is there any explanation for that?

Mrs. NORWOOD. Why should you be concerned?

Senator PROXMIRE. What's that?

Mrs. NORWOOD. Why should that be a concern?

Senator PROXMIRE. Well, it's a situation in which there were fewer men unemployed in February by quite a bit, 4.9 percent compared to 5.2 percent, and then it's reversed in March with more men unemployed than women. I wondered if there's any explanation for that. Is that because women are in the service industries which have been stronger than other industries?

Mrs. NORWOOD. The decline in the number of unemployed women was larger than the decline in their labor force last month.

Senator PROXMIRE. Well, if more women were in the labor force, then the unemployment rate shouldn't have gone down, isn't that right?

Mrs. NORWOOD. Pardon me.

Senator PROXMIRE. If more women were in the labor force, the unemployment rate should not have gone down, isn't that right?

Mrs. NORWOOD. Yes. However, there were fewer women in the labor force.

Senator **Proxmire**. Fewer women, OK.

Then I'm concerned about the second line after that where you have black unemployment in January, 12.2 percent; black unemployment in March, 12.8 percent. That's a very big rise in 2 months.

Mrs. **Norwood**. It's not statistically significant.

Senator **Proxmire**. Well, it may not be, but it's still some indication.

Mrs. **Norwood**. It's very high. There's no question about it.

Senator **Proxmire**. Now you also have an increase in Hispanic unemployment from 7.2 to 8.2 percent. Is that statistically significant?

[Mrs. Norwood shaking head]

Senator **Proxmire**. One full percentage point is not statistically significant?

Mrs. **Norwood**. No. The unemployment rate for Hispanics has been in the 8.1 to 8.3 percentage range since last October.

Senator **Proxmire**. Except it was down in January to 7.2 percent.

Mrs. **Norwood**. Yes. That was an outlier pretty clearly.

Senator **Sarbanes**. Could I ask a question?

Senator **Proxmire**. Yes. I yield to the chairman.

Senator **Sarbanes**. At the time of the Kerner report in 1968, 20 years ago, the black unemployment rate was twice the white unemployment rate. Those figures—this is 20 years ago now, just to give some perspective on what unemployment rates were—was 6.7 percent for blacks and others, 3.2 percent for whites.

Currently, the black unemployment rate is more than 2½ times the white rate, 12.6 percent versus 4.8 percent in February.

Have you identified any factors to explain why the employment situation has deteriorated for blacks during the last 20 years?

Mrs. **Norwood**. Well, I believe that a lot of the discussion that we've seen in the media over the last month or so on the anniversary of the Kerner report has cited a number of problems. We have been over them here before.

There are those who believe that some of the black population which has had the advantage of decent schooling has done fairly well in the labor market, and that there are others who have fallen behind. And we may be seeing the truth of some of that I think.

It's quite clear that the labor market of today and of the future is going to require more training and more education. Therefore, we really have quite a formidable task on our hands to prepare people to work who just do not have the kind of training for the jobs that are available today.

We are seeing, interestingly, that there is quite a rapid increase in the labor force and in employment of the Hispanic population. Their unemployment rate is still much higher than for the white population as a whole. Nevertheless, they had an increase over the last year of 400,000 in their labor force and they had an increase of almost 450,000 in employment.

The black population, which is much larger than the Hispanic population, had an increase in the labor force of only half as much, 245,000, and had an increase in employment of about 350,000.

So the Hispanics over the last year seem in a way to have been doing better than the blacks.

Senator **Sarbanes**. To what extent does that reflect illegals who are becoming legal under the new legislation?

Mrs. **Norwood**. We don't know, of course, but we do believe that we have gotten a lot of those people who were undocumented in the household survey because we have maintained confidentiality of the data and we haven't tried to distinguish among them. But we can't be sure, of course.

Senator **Sarbanes**. Well, I must say I find that there is something wrong with this 20-year retrospective explanation.

Mrs. **Norwood**. Yes. That's quite clear.

Senator **Sarbanes**. We've gone from a 3.2-percent unemployment rate for whites and a 6.7-percent rate for blacks 20 years ago to a 4.8 percent for whites and a 12.6 percent for blacks. We've had a general deterioration in the level of unemployment. In other words, we tend to lose perspective on that and on how much the unemployment situation has deteriorated generally. Then there has been an even sharper deterioration for the black population over two decades, when supposedly we were making advances in terms of equal opportunity and eliminating discrimination in the job market. Yet we've had this worsening of their relative position.

Mrs. **Norwood**. That's correct.

Senator **Sarbanes**. It's your view that the reason is the change in the nature of the job market and the nature of the skills that are required?

Mrs. **Norwood**. I don't think that's the only reason. That's one of the reasons that makes the problem in the future even more serious for us I believe. It's certainly not the only cause.

We have had black youngsters who have grown up in poverty who have had very little hope and very little training and we expect them to become productive members of the labor force.

Senator **Sarbanes**. But that was the case in 1968 and may have been even more the case then.

Mrs. **Norwood**. I think that there may be differences now in expectations on the part of the whole population, not just the black population. There are a number of differences now.

Senator **Sarbanes**. Commissioner, I want to be clear about the figures for this month. Actually, employment dropped, is that correct, by 300,000 from last month?

Mrs. **Norwood**. In the household survey. It rose in the business survey.

Senator **Sarbanes**. Is the explanation for the lower unemployment rate related to the decline in the labor force?

Mrs. **Norwood**. Yes.

Senator **Sarbanes**. So, in other words, the unemployment rate went down not because jobs grew, but because the number of people seeking jobs declined?

Mrs. **Norwood**. Well, that's one way of putting it. I would say that the unemployment rate really didn't go down because there was only a tenth difference over the month. I think what we've been seeing over the last year or last 6 or 7 months is a continuing drifting downward of the unemployment rate bit by bit. And I think that has been sustained this month.

But as I said in my statement, I think that it is wise this month to focus on the employment numbers in the business survey which are showing an increase but a slower increase than we have had.

Senator **Sarbanes**. Let me ask the questions on statistics that I indicated earlier I was interested in raising.

First of all, the census forms have now been finally determined for 1990, as I understand it.

Mrs. **Norwood**. Yes.

Senator **Sarbanes**. There has been a decision to allow the census to include certain questions, particularly relating to housing and some other matters, and also to have a larger long form survey in terms of the size of the sample who will be questioned under the long form.

What's your view of the effect this decision will have on the work at the BLS?

Mrs. **Norwood**. Well, first, let me say that I am very pleased that OMB and Census have reached agreement and I also am grateful to you for the efforts that you and others have made.

Some of the information that was in dispute were data that we use for developing parts of the Consumer Price Index. We are particularly pleased that several elements of the housing data have been retained and put back on the short form because that will improve the validity of those data.

In addition, there are other questions that will be on the long form and since there has been agreement that the sample for the long form will be larger than OMB had at first mandated, I think that's a very important step forward.

We have to remember that the only reliable data that we have for local areas come from the decennial census. There is no other survey of any kind in the whole statistical system that is large enough to produce reliable local area data. And if we begin to cut back on the local area data in the census, then that means that for the whole decade we are without it.

So I think it is terribly important that this agreement has been reached and I look forward to being able to use the data.

Senator **Sarbanes**. I understand that it's been more than two decades since BLS substantially revised the questions in the current population survey which is used in compiling the monthly unemployment statistics and other BLS statistical series.

Do you see problems in the current design of the current population survey?

Mrs. **Norwood**. I believe that anything we do can be done better. I also believe strongly that it is time for the current population survey to be revisited. It is a survey which was designed, as you know, originally in the early 1940's for the kind of population and household and family arrangements that we had then. We have made some changes, but the last time the questionnaire was reviewed and changed substantially was in January 1967.

That's a very long time ago. We have learned a lot since then. There is a whole new approach to cognitive science and survey design. We at BLS have just begun the establishment of a cognitive laboratory to be able to examine more carefully the language, the wording of questions, to see whether respondents really understand what we're asking them, to see what the effects are if you ask a question before another battery of questions or after it, to see also what the effects are if you structure a questionnaire completely or if you relax that structure somewhat to permit a relationship to be established between the interviewer and the respondent.

I believe there are other aspects of this, too, that are important. What kind of training should we have for our data collectors and what kind of educational backgrounds do our best data collectors have?

What are we learning when we go back and recollect data? Is that really a measure of error or is it bringing together a lot of other elements of the process that occurs—the psychology that occurs between the data collector and the respondent?

We have begun a long-range planning effort with the Census Bureau. We have had a number of meetings and have developed plans for the CPS of the future. We are beginning some of the research. You will be hearing more about it because obviously we are going to require budget increases in order to be able to do some of this work, but we are getting underway whatever we can at this point with existing resources.

I believe that the next redesign has to be a very basic redesign. It is time for us to do this because we redesign the current population survey after the data from the population census become available and that would be somewhere in the early 1990's. So this is a good time to begin the research and the planning efforts.

We need to have more local data. We need to be sure that people understand all of the questions that we are asking. We need to see whether there are better ways for us to do this work.

Senator SARBANES. On January 20, OMB published for comment a set of proposed guidelines for Federal statistical agencies that would have to be followed in conducting statistical surveys and other activities.

What effect would the OMB's proposed guidelines for statistical agencies have on your work at the BLS?

Mrs. NORWOOD. I'm not sure, Senator. The guidelines are not really very clear. We have reviewed them with great care and we have discussed them with others in the statistical system.

We find that many of the goals are very worthwhile, but many wording changes would be required. There are also some things that are misstated and are perhaps impossible to achieve.

If the guidelines were intended to be actual orders, we would I think require an enormous increase in budget. If the guidelines are intended to be just that, goals for the future, they might be quite useful, with considerable changes in the wording.

Senator SARBANES. Were the guidelines formulated in consultation with the statistical agencies?

Mrs. NORWOOD. No, they were not. They were issued for comment and all of the statistical agencies are reviewing them, as well as many members of the public who are interested in statistics.

We have requested a meeting at OMB to try to get a better understanding of OMB's interpretation of the guidelines. I think they need to be substantially rewritten.

Senator SARBANES. I find it very difficult to understand how OMB, which has no significant technical expertise in this area, could undertake to formulate guidelines without engaging in a process of discussion and consultation with the various agencies involved in conducting the surveys and other statistical activities.

Mrs. **Norwood**. I think the response of OMB to that would be that what they have tried to do is to pull together a series of documents that already existed. The problem is that in so doing they have rewritten them and changed them perhaps in ways they did not intend. We need to look at that with great care.

I do believe that the overall goals are probably sensible ones. It's just a question of how they are written and what would be required and whether it's even possible to do some of the things that appear to be specified in that document.

We also have not received consistent answers to our questions from the OMB staff. So we think we need to have more information.

Senator **Sarbanes**. Well, I don't quarrel with that conclusion and I think the Congress probably shares that view as well in terms of more information.

Senator Proxmire.

Senator **Proxmire**. Commissioner Norwood, the average workweek for all production nonsupervisory workers on private nonagricultural payrolls decreased.

Mrs. **Norwood**. Yes.

Senator **Proxmire**. It decreased by 0.2 hours in March and the manufacturing workweek went down a little bit, 0.1 hours. Factory overtime was unchanged.

All these are the kinds of developments that occur when unemployment is rising or maybe is expected to rise in the future. Maybe that's the leading indicator. At any rate, it seems to contradict again the good news. What's your explanation?

Mrs. **Norwood**. Well, factory hours are clearly a leading indicator, but a one-tenth drop in factory hours I think in 1 month at a time when hours are quite high——

Senator **Proxmire**. How about the overall drop throughout all of our employment of 2 hours?

Mrs. **Norwood**. Yes, I realize that, but it's factory hours that are the leading indicator, and a one-tenth drop at a time when the hours are very high, I think we need to wait for another month or two of data before we decide that this is a serious problem.

Senator **Proxmire**. But what's your reaction to the fact that overall throughout the country as a whole hours of work declined by twice as much?

Mrs. **Norwood**. They are still very high.

Senator **Proxmire**. Well, they're high, but they're going the wrong way in terms of indication of demand for labor.

Isn't it true that usually when unemployment is falling hours increase? This time they went the other way.

Mr. **Plewes**. To a certain extent, Senator, I think that something is going on with hours that we don't quite understand.

Over time, I believe employers have used hours as a substitute for hiring more workers. They increased the hours of the people onboard. To the extent that that has happened in the past and to the extent that hours are coming down, some employment growth could take place. Employers may be trading some hours for some workers.

In some industries that is perhaps what is happening. That's why we focus mostly on factory hours where we do see a leading indicator status there.

Senator **Proxmire**. All right. Then we have two elements here that are going in a contrary direction. One is the discouraged workers are up and, second, hours are down. And the third, which also puzzles me very much, is the real hourly earnings have declined and declined sharply. In dollars of constant purchasing power, the hourly earning index decreased 1.1 percent during the past 12 months.

Why should that be in an economy that's recovering and unemployment falling? Why are hourly earnings going down?

Mrs. **Norwood**. In part because inflation has decelerated and, therefore, the——

Senator **Proxmire**. But this is in real terms.

Mrs. **Norwood**. The engine that pushes wages up has been reduced, the speed has been reduced in any case, so we're seeing much less upward pressure on wages. I think a further element is that the hourly earnings only reflects the situation for production and nonsupervisory workers. The production worker group has been affected by the restructuring of industry and by the shifts in labor union status.

Senator **Proxmire**. Well, the latter part of your explanation I can understand. The first part I cannot. It seems to me if inflation is rising, then real wages—which of course are corrected fully for inflation—should be increasing.

Mrs. **Norwood**. But there's usually a lag. We often find that when there is a high rate of inflation an increase in wages may occur even after inflation begins to decelerate.

I think the important thing is that labor costs have been kept fairly level. Our employment cost index does not show the declines that the hourly earnings index does in real terms. It is moderate, but it is going up at a rate that is close to the rate of inflation, maybe slightly down but not as negative as the other earnings data show.

Senator **Proxmire**. The fact is that real wages are going down at a time when unemployment is also going down. It seems to me that wouldn't make any sense based on historical experience.

Mrs. **Norwood**. One also needs to take account of compensation other than wages and salaries, which are not included at all in the hourly earnings index.

Senator **Proxmire**. What changes have there been in compensation? There has been some discussion, but what changes have there been?

Mrs. **Norwood**. The cost of many of those has been increasing. Health insurance and pension plans. Those costs to the employers are increasing and that's in a sense a kind of payment to workers.

I'm not suggesting that that changes the picture enormously.

Senator **Proxmire**. Are you making that as an assertion or is that a supposition?

Mrs. **Norwood**. No. That's true.

Senator **Proxmire**. Can you document that?

Mrs. **Norwood**. Yes.

Senator **Proxmire**. OK.

Now on diffusion of employment, that is the percentage of industries in which employment has increased, that's an indication as I understand it of the likelihood of employment increasing and unemployment dropping in the future.

In November, we had a very good record of 71.9 percent diffusion. That is, 71.9 percent of the factories work units in this country were increasing employment. In December, that went down to 63.2 percent; in January, down to 60 percent; and in March it's down to 55.7 percent.

Is that an indication that we may be in some difficulty in the future in unemployment?

Mrs. **Norwood**. I think it's an indication of slowing the employment growth. Tom Plewes probably has something more to say about that.

Mr. **Plewes**. Even at 55.7 percent, there are more industries that are expanding than there are staying steady or going down. This month I think we also saw a lot of very small employment changes in the manufacturing sector, and that could turn around. So I wouldn't put too much on any one month. But I think the point you make, Senator, is quite correct, that if it is in a downward mode it is heavily affected by what's going on in manufacturing and manufacturing is indeed slowing from the fourth quarter. I think that it's approaching the threshold where we start to worry about it, and that's at that 50 percent level that we've talked about in the past.

Senator **Proxmire**. Now let me ask a provincial question. You have very helpful charts showing unemployment changes between March 1987 and March 1988 improved, of course, all over the country as we recovered.

However, there were two sections of the country that were particularly in trouble and they were both in trouble to about the same extent. One was the West South Central. That is Arkansas, Louisiana, Texas, and Oklahoma. Everybody knows they're in trouble. They're in trouble because of not only the agricultural situation but primarily the energy situation—deep trouble.

But then the other that didn't do very well are Indiana, Illinois, Michigan, Ohio, and Wisconsin. And we did about as badly as the West South Central. We don't have anything like the difficulties they have on energy. We don't produce any energy in this area. I guess Illinois has a little.

What's the explanation for that? Why did the East North Central do so poorly?

Mrs. **Norwood**. Well, it's basically the industry problem. There still are some plants that are closing down. Some of the industries located in Michigan, Illinois, and Ohio are not doing as well as those in many other areas. They are trying their best to stay open and to keep the labor force they have. They're certainly not adding workers. In fact, they have been losing workers. And in some of those places people have been leaving, and generally moving West.

Senator **Proxmire**. Now let me ask you a question that has been put in a different form before but I think the latest unemployment figures make it even more important.

The decline of the civilian unemployment rate to 5.6 percent brings the rate to the lowest level achieved during the 1975–80 expansion. That was in May 1979. That achievement, however, occurred under very different circumstances. Job growth during the current expansion was weaker than during the 1975–80 expansion.

During the 57 months of the earlier expansion, the economy created 14 million jobs. That was during 57 months. Compared to 14,900,000 jobs during the 64 months of the current expansion. Labor force growth has been much weaker during the current expansion—9.8 million compared to 13 million or about 3.2 million fewer workers during this expansion. Had labor force growth continued at its earlier pace, the unemployment rate today would be around 8 percent rather than 5.6 percent.

My question is this. The March unemployment rate of 5.6 percent matched the lowest unemployment rate of 1979. How many fewer new workers did the economy have to absorb during the current expansion than during the 1975–80 expansion?

Mrs. NORWOOD. Well, I don't have the specific answer to that.

However, we have had 64 months of recovery or expansion now and you're comparing this period to a period when there were a number of different demographic issues. We've already discussed here this morning the difference in the labor force, the fact that the labor force is growing much more slowly.

Senator PROXMIRE. More women came into the work force in the earlier period?

Mrs. NORWOOD. Pardon me.

Senator PROXMIRE. You said more women came into the work force. That was the main explanation you gave.

Mrs. NORWOOD. Well, in the 1960's in particular, but I think probably in the later 1970's too, women's entrance into the labor force was greater and there were still more young people reaching labor force age than today. Over the past year there has been relatively little change in the number of young people entering the labor force. If you look at our business survey, there are 15 to 16 million jobs that have been created in the 64 months of recovery.

One of the other reasons, of course, is that the 1981–82 recession was steeper and sharper than the 1973–75 recession. So in the beginning we recovered more quickly, but we had a much longer way to go.

But we'll be glad to look at that question.

Senator PROXMIRE. My time is up.

Senator SARBANES. Commissioner, the participation of women in the labor force has gone up really dramatically since 1948, and there are lots of reasons for that which I think have received extended public discussion. But the labor force participation rate for adult men has declined over that period and not by an insignificant amount.

What's the explanation for that?

Mrs. NORWOOD. Well, I think we're seeing earlier retirements. I believe that we may see earlier retirements for women eventually as well when they have Social Security coverage and have built up sufficient benefits. I think that's the major reason.

Senator SARBANES. So your explanation for a decline in the participation rates for adult men from about 90 percent in 1948 to less than 80 percent today is early retirement?

Mrs. NORWOOD. That's a large part of it.

Mr. PLEWES. And more disability retirements now, too.

Senator SARBANES. Let me ask you this question. Do you ever have any nagging doubts about the validity of our survey techniques and the figures they produce in terms of giving us a clear picture of what's happening out there in the economy?

Mr. Plewes earlier said to Senator Proxmire, when he was asking about some of these hourly figures, "Well, things are going on out there"—I wrote it down—he said, "Things are going on out there that we don't understand." I must say to you, particularly this morning, on occasions I begin to wonder. We just talked about the fact that over 20 years you haven't made any major changes in the current population survey. You've indicated this morning that you feel a need to do that, and in a very fundamental way.

I guess the question is this: How much concern should we have about how accurately we are finding out what's happening in the economy?

Mrs. NORWOOD. Well, the direct answer to your question is, of course, I have concerns. I am constantly looking for ways to do things better.

The set of data that we issued today, for example, where one survey goes in one direction and the other goes in the other direction focuses a lot more attention on these surveys. If they were both doing the same thing, we would probably be focusing attention on other issues.

As you know, we don't just go out and count things. We have to define the phenomenon that we measure and since social and economic issues keep changing and society's view of them changes, those definitions may have to be revisited. In addition to that, the way in which we live changes. Family relationships have changed. We have a household survey which allows the respondent to provide information about the experience of other people in the household. Forty years ago, that was quite appropriate. Today, I think we ought to be looking to see whether families are as closely knit as they used to be and whether one person in that family can continue responding for the others in the family.

The problem is that if we should find in our review that we have to change our procedures, then we really are talking about very large expansions in budgets, which none of us are anxious to have. Also, the statistical art keeps changing. Ten or fifteen year ago, we talked about questionnaries but we didn't really understand how the sociologists and the anthropologists and the linguists and the psychologists could help us in designing the right kind of questionnaire.

For example, the Bureau of Labor Statistics has been asked by the Department of Labor to do a special survey to try to find out how much drug testing is being done of employees in business establishments. We put together a questionnaire and we tested it in a laboratory setting to see whether people who were asked these questions understood what we were asking. This was a new procedure for us. What we used to do was to design a questionnaire and then spend a lot of money going out into the field trying it out.

We now have learned that there is a step that we can take which will make our field tests much more valuable and I think much more cost effective. But that's fairly new. I think if you look at the literature you will find that 20 years ago there was very little work of that kind.

Tom Plewes and I have been discussing these issues with an OECD working party on employment statistics. We have begun discussions with representatives of the Western European countries and others who are members of that working group to see what we can learn from each other about questionnaire design and interviewer techniques.

But these are fairly new issues. We have not had a redesign of the current population survey for many years, really not a substantial one since 1967. We are hard at work in BLS and have been for some years in modernizing our business survey. I can tell you today that that business survey is far better than it was 5 years ago or 10 years ago, but it's not yet where I would like it to be.

Senator **Sarbanes**. Let me ask this question just to probe beneath the surface.

As I understand it, in the employment figures, anyone who works a few hours is counted as employed.

Mrs. **Norwood**. That's correct.

Senator **Sarbanes**. So if someone works 3 to 4 hours a week that person would show in the figures you're giving us as an employed person.

Mrs. **Norwood**. That's correct.

Senator **Sarbanes**. Has the number of people working less than what's considered a normal week increased historically over the last couple of decades?

Mrs. **Norwood**. There has been an increase in part-time workers. And as you know, we have two kinds of part-time workers. We have 14.6 million who are working part time because that's just exactly what they wanted to do, and then we have another 5.3 million who are working part time because they can't find a full-time job. Those are the ones that we need to be very concerned about.

The economy should provide part-time jobs for people who only want to work part time.

Senator **Sarbanes**. But the number of both of those categories has increased significantly, I take it, in recent years?

Mrs. **Norwood**. Yes, that's correct.

Senator **Sarbanes**. I can see that if someone wants to work part time, that's what he or she ought to be able to do. But at the same time we continue to treat that person as employed full time when we portray the overall figures. Isn't that correct?

Mrs. **Norwood**. Yes; although we publish the figures separately, as well.

Senator **Sarbanes**. We talk about job creation, but the job creation doesn't distinguish between a job created for 40 hours a week or a job for 20 hours a week or a job for 5 hours a week.

Mrs. **Norwood**. That's true, but it is also true that during the current expansion more than 90 percent of the jobs that have been created have been full-time jobs.

Senator **Sarbanes**. Now if the people who are working part time but want to work full time were counted in the unemployment rate, what would the rate be?

Mrs. **Norwood**. Well, if we count them and the discouraged workers, we would have a rate of about 8.8 percent.

Senator **Sarbanes**. That's counting the discouraged and part-time workers.

Mrs. **Norwood**. And one-half of the part-time employed because they're working part of the time.

Senator **Sarbanes**. Right. How does that figure compare historically?

Mrs. **Norwood**. It's lower than it has been certainly during the early 1980's.

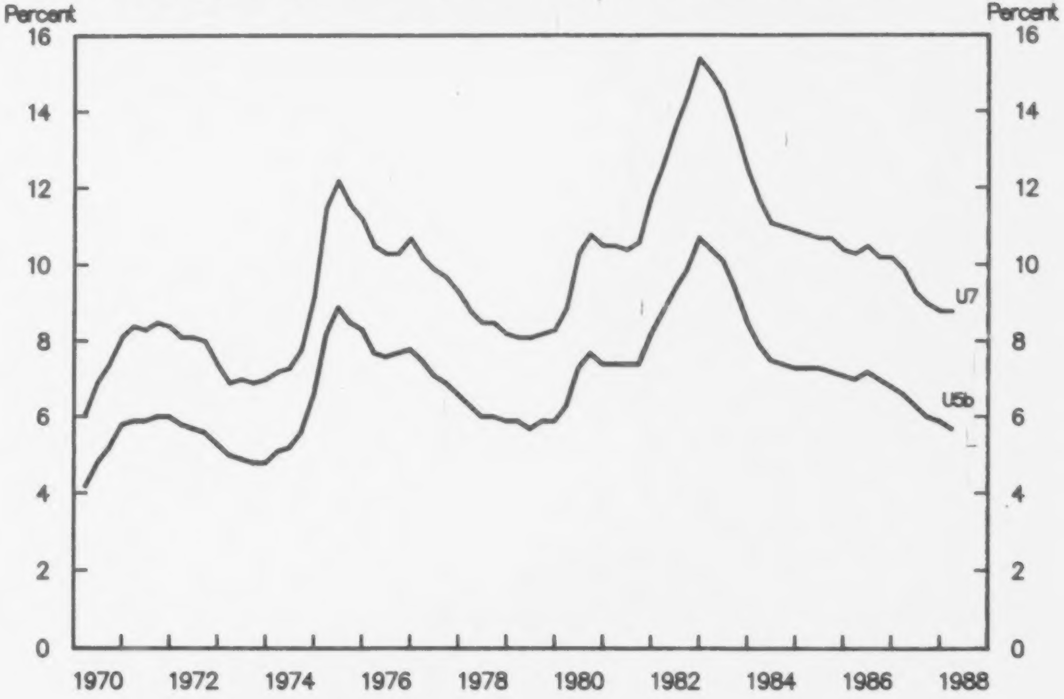
Senator **Sarbanes**. Of course, all the figures were up then. Let me put the question this way. Is there normally the spread between the unemployment rate and the current figure or is this spread larger than it ordinarily has been?

Mrs. **Norwood**. It may be slightly higher because of the part time for economic reasons being higher and the discouraged workers being higher.

Generally, the direction is pretty much the same. One line fits on top of the other. But we'll look at that and we will do some charting and send it to you.

[The following information was subsequently supplied for the record:]

Range of unemployment measures based on varying definitions of unemployment and the labor force, seasonally adjusted, quarterly averages, 1970–88



Source: Bureau of Labor Statistics

Senator Sarbanes. Senator Proxmire.

Senator Proxmire. I just have one other question.

What can you tell us about the number and ratio of the unemployed receiving unemployment benefits?

Mrs. Norwood. Well, that's close to 40 percent I believe.

Senator Proxmire. What percent?

Mrs. Norwood. If we look at the regular unemployment, the total unemployment insured as a percentage of the total unemployed in the current population survey, that's 37.6 percent. So it has gone up slightly. It was down as low as 25 percent a few months ago.

Senator Proxmire. Well, that's awfully low it seems to me.

Mrs. Norwood. Yes, it has been.

Senator Proxmire. I realize it may be above what it was earlier in the year, but even still it's a very, very low figure. Most people assume—those of us who haven't had much experience with unemployment—that the people who are unemployed, after all, they have unemployment compensation. That's not the case. The great majority do not have.

Mrs. Norwood. That's right. I think there has been a considerable change in labor market behavior and, in part, in the demographics. In order to have unemployment insurance you have to have worked and have a certain number of credits. Many people have not had that work experience. All of the new entrants to the labor force, for example.

Senator Proxmire. How do you account for the fact that the first figure you give us, on May 17, 1975, 67 percent of the unemployed were covered—67.2 percent?

Mrs. Norwood. Yes. Well, I think there have been some changes.

Senator Proxmire. Now it's down to 37 percent. So it's only a little better than a half.

Mrs. Norwood. Let me say first that there are some differences there that we really do not understand. As I have mentioned before, I would like to see a little more attention being given to the statistical aspects of the unemployment insurance data.

Nevertheless, there have been changes in the law. There are changes in the way in which the States are administering the law. I think there has been a tightening of the whole system. The requirements to get unemployment insurance in some States have been changed quite a bit to reduce the possibility of people getting unemployment insurance unless they meet certain standards. In the 1970's, those standards were much looser. Some of that is State action. Some of that is congressional action.

Senator Proxmire. At any rate, the fact is that better than three out of five people who are out of work do not have unemployment compensation.

Mrs. Norwood. That's correct.

Senator Proxmire. Thank you.

Mrs. Norwood. And we also have, of course, two-earner families so that the situation is not quite what it was many, many decades ago. There is some cushioning. I don't think that, however, is in any sense a substitute and should not be considered a substitute for unemployment insurance.

Senator **Proxmire**. Of course, if we have a woman who has a dependent family, it's very cruel for them.

Mrs. **Norwood**. Yes. Those 11 million women, one out of three of them is in poverty, and that's a very, very serious situation. Their children may become discouraged workers when they grow up. I don't have statistical evidence of that, but I am concerned about it.

Senator **Proxmire**. Thank you.

Thank you, Mr. Chairman.

Senator **Sarbanes**. It seems to me this discussion has made clear that while we have an overall figure that may look good, lots of problems become apparent when you start probing beneath the surface of it. We have discouraged workers. We have part-time workers. We have unemployed people who do not draw any unemployment compensation. It's down from roughly two-thirds of those unemployed drawing unemployment insurance whereas now it's about one-third, roughly speaking, which seems to me a drastic shift.

So there may be things at work beneath the surface that we don't have a complete grasp of, or a feel for. We also have more two-wage-earner families, but I've read some articles that say that it doesn't enable them to get ahead. It happens simply because they want to stay even or keep from falling behind; in many instances that is the motive force in the two-earner family. So it doesn't really give them a cushion or an extra advantage. They are pressed into it, in part, simply to maintain an existing standard of living. I don't know whether you have studies on that.

Mrs. **Norwood**. No, we don't.

Senator **Sarbanes**. Well, Commissioner, thank you very much and we thank your colleagues for being with us.

The committee is adjourned.

[Whereupon, at 10:55 a.m., the committee adjourned, subject to the call of the Chair.]

○